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THE TRANSPORTATION & BUSINESS LOGISTICS MAGAZINE NOVEMBER 1987

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FRED TOLAN

1987 NITL Man of the Year

Career Patterns Survey: Measure Your Success

Motor Carrier Diskette Rating Systems

Trucking Tactics And Strategies

VOL. 86, NO. 11 CHILTON'S DISTRIBUTION NOVEMBER 1987

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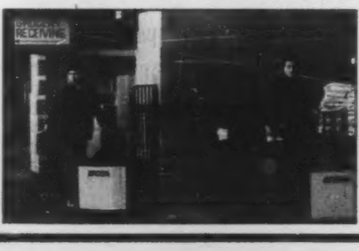

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THE EMERGING PUBLIC WAREHOUSE

The impact logistics has on customer service levels is widely touted today as perhaps the best way to differentiate one company's products from a competitor's. How does the shipper's warehousing strategy fit into the customer service equation? Are shippers finding that public warehousers can provide the same service levels as field warehouses? How is the mix of public and private warehousing changing? How are these changes affecting transportation costs? Finally, what do shippers need from public warehousers to increase their use of this option?

"We're shippers of frozen goods, and refrigerated docks would be important to us. We would also like to have public warehousers assume primary responsibility for the movement of our product, including the loading of a vehicle. This would afford us greater control of that process and assure us of greater product integrity in terms of temperature control. In other words, our product would not be staged for excessive amounts of time on an open dock."—**Gregory Surabian, general manager, traffic & transportation, Ore-Ida Foods, Inc., Boise, Ida.**

continued

JIT and other inventory-reducing strategies are:	
reducing inventory in field warehouses	56%
reducing the number of private warehouses while increasing the use of public warehouses	44%
reducing the use of public warehouses through consolidation	33%
replacing inventory with consolidations and direct shipments	56%
JIT and other warehousing strategies have resulted in:	
lower customer service, no impact on sales	33%
lower customer service, lower sales	11%
lower warehousing costs, acceptable increases in transportation costs	11%
lower warehousing costs, unacceptable increases in transportation costs	21%
lower inventory, greater profit, same sales	21%
poorer coordination of inventory with sales, with little cost savings	11%

QUESTION OF THE MONTH

THE ART OF NEGOTIATION

The success of the logistics department, perhaps more so than any other function in a corporation, depends upon skillful negotiation. You and your people have to negotiate daily with customers, suppliers, carriers, and regulatory agencies, not to mention manufacturing, marketing, purchasing, finance and other departments within your own company.

DISTRIBUTION wants to know how shippers perceive themselves as negotiators. To what extent do you get involved in the negotiation process? Are you in on negotiations from the start, or are you merely informed of the outcome and expected to live with the results? How do you stack up against your negotiating counterparts from the carrier side, and from other vendors of logistics services?

Finally, what do you need to be a better negotiator? What skills are most important in the negotiating process? Which ones do your negotiators lack most? Fill in your answers to the questions on the card below; then watch for the first of two articles on negotiating in DISTRIBUTION's February issue.

DIALOGUE

November 1987

- Which department has primary responsibility for negotiating with logistics vendors? ______Traffic/Trans.; ______Logistics; ______Purchasing; ______Legal; ______Administration
- What is the extent of your involvement in negotiations?
  ______I am consulted only before the negotiations begin to establish requirements
  ______I am an active participant in all stages of negotiations
  ______I am only told what the results of the negotiations are
- Our negotiations focus on the following elements (rank one to four in order of importance):
  ______rates ______service levels ______liability
  ______information exchange (EDI, reports generated)
- In terms of negotiating skill, I consider myself:
  ______Very good; better than most of the vendors I deal with
  ______About the same level as the vendors I deal with
  ______Inexperienced, an easy mark for a skilled negotiator
- Our negotiating strategy is best summarized as:
  ______Give the carrier a take-it-or-leave-it offer
  ______Let the other party make the first offer, and then counter offer with the expectation that we'll meet half way
  ______Try to reach a win-win result
  ______Wing it and see how good a deal we can get

Here's what shippers need to do to become better negotiators:

NAME (print) TITLE

COMPANY PHONE

ADDRESS

CITY STATE ZIP

DIALOGUE continued

FIGURES IN SPEECH

(Quotes from transportation and distribution notables that have caught the ears of DISTRIBUTION editors:)

"In general terms, American industry is moving away from what has been a top-down military structure to what might be described as a network of interactive platoons that will have well-defined tasks, but will also be expected to be opportunistic in performing them. Flexibility and initiative will be prized . . . Successful management is leadership without specific instruction. You must be able to focus effort without stifling initiative. You give thrust to your enterprise and set high standrads for it, but you don't define exactly how tasks are to be carried out. You energize people, unleashing their talents." —**Drew Lewis, president and CEO, Union Pacific Corp.**

•

"The average fleet size of a private carrier dropped by nearly a third over the past two years. However, I don't read into those figures a lessening of a commitment to private carriage. Even where the fleet cannot be justified on a cost basis, we are not seeing an abandonment of the private fleet. Rather, shippers are keeping the commitment to their private fleets to use as leverage. Private carriage is the natural regulator of the marketplace." —**Thomas L. Moore, executive director, National Private Trucking Assn.**

WAREHOUSING continued from p. 7

"I would like to see public warehousers approach us with an EDI package. They don't have the resources or the time to initiate these kinds of projects. And individually, they might not have the need to offer EDI, but collectively I think they do." —**Don Van Buhler, director of physical distribution, Adolph Coors Co., Golden, Colo.**

"As a public warehouseman, I have found that our customers are looking for a public warehouse that will provide them with excellent customer service, information that will help them improve their sales and service, plus competitive costs compared to field warehouses. Value-added services are becoming more and more important." —**Manny Miyar, president, American National Storage, Franklin Park, Ill.**

"We stopped using public warehousing facilities due to increased fees for everything from storage charges to in/out fees. Having been with a customshouse broker in the past, we simply opened up our own bonded warehouse to defray all customs duties until the product is actually withdrawn from bond." —**Ross A. Layne, Import/export manager, Universal Convertors & Importers, Inc., Tulsa, Okla.**

EMERGING PUBLIC WAREHOUSE STRATEGIES

A survey conducted by the Warehouse Education and Research Council

Statement	**Avg. Score**
Public warehouses will be performing more and more special handling, assembly, packaging, etc.	1.72
Specialized public warehousing will develop to handle specific market segments (grocery, automotive, etc.)	2.06
Computers will be used in planning and managing public warehouse daily operations	1.72
Public warehouses will remain a significant cost advantage relative to private warehousing	2.78
Public warehousing may replace some private operations due to increases in private sector labor rates	3.00
There will be greater use of computers to disseminate order status to clients	1.78
There will be greater use of public warehouses as distribution agents or cross dock distributors to complement products in storage	1.91

key: 1 = strongly agree, 2 = agree, 3 = no opinion, 4 = disagree, 5 = strongly disagree

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DISTRIBUTION CAREERS:

SEARCHING FOR THE PERFECT PATH. . .

. . .or at least something close. Dr. Bernard LaLonde's distribution career study, presented annually at CLM, reveals a continuing need to shape career patterns into career paths.

By Joseph V. Barks, Contributing Editor

After years of concentrating on better managing physical plant and inventory capital, companies now are rediscovering another area where assets often are wasted: "human capital."

The new religion of lean and mean has put a premium on the need to attract, develop, motivate, compensate, and retain top-notch talent. Fewer managerial slots means less margin for error, and a greater need for peak performance from the positions remaining.

Companies now are returning to human resources (HR) as a key strategic area. HR, it is felt, must help companies gain a competitive edge in an era of slow growth and serve as a first line of defense against "brain drain."

For the past 16 years, Dr. Bernard J. (Bud) LaLonde, Mason Professor of Transportation and Logistics at the Ohio State University, has conducted the preeminent study of career patterns in the distribution field.

The original study in 1972 was prompted largely by a need to create a professional profile from the long list of PD-related titles that existed then. The industry since has gained a better handle on what the distribution function is all about; still, little has been done to develop the discipline from a human resources perspective – to put PD organizations and practitioners on more directed courses.

"You go around at a meeting like this and you'll find 300 sessions, and a lot of wonderful stuff," LaLonde said at last month's CLM gathering in Atlanta. "But most of it is oriented to technology like EDI or management concepts like JIT; there are very few *people* sessions that focus on how to develop an organization or an individual career path."

LaLonde's HR-oriented efforts in this year's survey are just a start. More data and seed work is needed if distribution career patterns are to be shaped into bona fide career paths.

Yet the infusion of a human resources perspective into the discipline will not run headfirst into established practices that will be hard to change or replace. True career paths can be shaped to make the most out of the human capital now in, or about to come into, the distribution field. Once those paths are laid out, logistics may come to be known as a field *into* which brains are draining – instead of the other way around.

LaLonde received 85 responses this year, a 21 percent return. Recipients, allowed only one response, were to have the survey filled out by the highest ranking logistics executive; 30 different titles were represented. LaLonde also issued a caveat about year-to-year comparisons, since each year's sample is not identical.

continued

CAREER PATTERNS

Job Titles (figure 1)

As would be expected of a sampling where a total of 85 respondents had 30 different titles among them, there still is not a great deal of unanimity within the distribution profession as to the proper managerial level to head up the function. Further complicating the issue is the perpetual problem of misleading titles. Certain industries, such as chemicals, invariably use the director's title to designate the head of any operational area; others, such as the food industry, are big on VPs. Yet each title is of equal value to its industry, and cannot be taken as a sign of more or less importance, or more or less pay. All of these factors add to the challenge of creating distinctive career paths for the profession. About the only conclusion that can be drawn from this data (when combined with responses to other questions) is that companies with VPs in charge of distribution do tend to be more operationally sophisticated (more EDI, more integration, more computerization, etc.) than companies that have managers or directors in charge.

Departments (figure 2) & Relationships (figure 3)

While the vast majority of respondents continue to see their own departments as pure distribution entities, in recent years more respondents have categorized their roles, and those of their superiors, as operations or manufacturing functions. This reflects the trend toward integration of logistics into a pre- and post-production orientation. Characterization of logistics as a marketing function, meanwhile, continues to dwindle from the dominant stature evidenced during the early years of the study. Overall, as Bud LaLonde noted in his CLM presentation, a significant enough scatter still exists among the functional options to suggest that a general consensus is needed to determine what kinds of organizations should run the logistics function. You wouldn't find the same kind of scatter when categorizing the role and fit of manufacturing or marketing or accounting organizations, LaLonde noted. The lack of a consensus as to where distribution should fit is a primary reason for the difficulty in constructing clear cut career paths for top distribution talent.

Organization (figure 4)

When the distribution function is clearly centralized within an organization, it is most likely to be headed by a manager, and least likely to be headed by a VP. A structure that has become more prevalent in recent years is the establishment of the logistics function as a separate operating division, which can then serve in a consulting or third-party role to provide warehousing, transportation, order processing, and other services. This structure is most often found in multi-division companies. The ever-popular combination structure is usually constructed so that sophisticated needs such as MIS and EDI are provided on a staff level, and basics such as transportation and warehousing are handled at the divisional level.

Time Allocation (figure 5)

Managers continue to spend the majority of their time tending to operations-oriented functions. Directors and VPs, meanwhile, have greatly broadened their charters to embrace a host of varied disciplines, from budgeting to purchasing to strategic planning. These added responsibilities mean logistics execs must interact more frequently with functions such as data processing, accounting, and marketing. From a human resources perspective, that makes "boundary-spanning" a major part of the distribution professional's job profile.

The second part of this chart attests to the concurrent broadening of the definition of logistics itself. The survey has revealed phenomenal growth in recent years in the recognition of areas such as budgeting, inventory, strategic planning, order entry, or international as integral to logistics. Ten years ago, Bud LaLonde notes, order entry was considered a logistics activity by only 10 percent of the respondents, and international by

continued

figure 1

JOB TITLES

	RESPONDENT	RESPONDENT'S SUPERIOR	SUPERIOR'S SUPERIOR
Manager	24.7%	1.1%	1.1%
Director	41.6%	14.6%	36.4%
Vice President	31.5%	69.7%	62.5%
Other	2.2%	14.6%	0.0%
Total	100.0%	100.0%	100.0%

figure 2

DEPARTMENTS

	RESPONDENT	RESPONDENT'S SUPERIOR	SUPERIOR'S SUPERIOR
Distribution	63.3%	1.0%	2.1%
Operations	16.4%	31.6%	19.2%
Marketing	5.1%	12.7%	6.4%
Manufacturing	2.5%	10.1%	10.6%
Staff	7.6%	11.4%	36.2%
Other	5.1%	15.2%	25.5%
Total	100.0%	100.0%	100.0%

figure 3

ORGANIZATIONAL RELATIONSHIPS

	MANAGER	DIRECTOR	VP
Staff	22.7%	13.5%	7.1%
Line	9.1%	16.2%	21.4%
Line and Staff	68.2%	70.3%	71.4%
Total	100.0%	100.0%	100.0%

figure 4

ORGANIZATIONAL RELATIONSHIPS	MANAGER	DIRECTOR	VP
Part of Corporate Div.	18.2%	10.8%	18.5%
Centralized Staff Dept.	36.4%	27.0%	22.2%
Combination of Centralized & Divisional	36.4%	43.2%	40.7%
Separate Logistics Div.	9.1%	16.2%	14.8%
Other	0.0%	2.7%	3.7%
Total	100.0%	100.0%	100.0%

figure 5

TIME ALLOCATION	MANAGER	DIRECTOR	VP	INDICATED ACTIVITY
Traffic	23.1%	15.2%	14.3%	97.5%
Warehousing	13.9%	15.2%	11.0%	93.9%
Gen'l Mgmt/Admin.	11.5%	16.8%	16.8%	86.7%
Budgeting	2.9%	16.8%	4.6%	80.5%
Inventory	7.7%	5.3%	7.1%	73.1%
Strategic Planning	5.2%	7.7%	7.3%	71.4%
Order Entry/Processing	6.2%	6.8%	4.5%	65.3%
International	4.6%	5.8%	4.7%	65.2%
Procurement	3.1%	3.1%	5.9%	44.2%
Packaging	3.9%	1.2%	2.6%	39.7%
Sales Forecasting	1.6%	1.5%	2.3%	26.0%
Product Planning	1.5%	2.1%	1.3%	26.8%
Other	5.2%	4.1%	3.6%	

figure 6

DEMOGRAPHICS	MANAGER	DIRECTOR	VP
Age	42.4	44.9	46.2
Years with Employer	11.6	10.8	12.8
Years in Field	16.7	17.6	17.1

figure 7

COMPENSATION	MANAGER	DIRECTOR	VP
1st Quartile	$45,200	$53,600	$ 73,800
2nd Quartile	$53,300	$70,600	$ 97,700
3rd Quartile	$65,900	$78,500	$117,200
4th Quartile	$87,100	$96,900	$166,400
Average	$62,700	$74,900	$115,900
Average % Increase	7.3%	8.91%	9.31%

figure 8

EXPECTED BUDGET GROWTH—1988

BUDGET ITEM	% INCREASE	STD. DEV.
Rail	1.6%	1.8
Motor Carrier—LTL	2.8%	2.9
Motor Carrier—TL	1.9%	2.9
Private Fleet	1.8%	2.2
Warehousing—Private	2.2%	2.8
Warehousing—Public	2.5%	2.3
Fuel—Gasoline	2.1%	2.7
Fuel—Diesel	2.8%	2.4
Inventory Carrying Cost	1.7%	2.9
Total Logistics Cost	2.4%	3.2

just 8 percent. you would also have been hard pressed to find anyone with a reference to any sort of planning function in his or her title or job description. Now, titles like "director of logistics planning" are fairly commonplace.

Demographics (figure 6)

In step with the characterization of logistics as an embryonic field, youth and mobility are apparent in the demographic profiles of executives at all levels. The numbers indicate that distribution career paths now offer a very fast track, with the steps from manager to director to vice president spanning only four years on average. And, there is evidence that progress along the fast track is probably further hastened by a mid-career switch of companies.

Compensation (figure 7)

In a year when neither the consumer price index nor the corporate average for compensation increases exceeded 4 percent, distribution execs did quite nicely for themselves. The sizeable average increases at all levels suggest that the logistics function continues to be repositioned into higher levels within corporate structures. It is quite likely, however, that the compensation increases are no longer coming from traditional means (merit raises and promotions), but rather as part of pay-for-performance packages which tie more of the executives' rewards to lump sum incentive payouts.

Budget Growth (figure 8)

Another assumption that can probably be drawn from the preceding compensation chart is that logistics budgets are growing, because individual compensation usually doesn't go up unless there is an equivalent rise in fiscal accountability. The responses to the survey's budget chart also show a general trend to budget increases within the logistics function. However, as evidenced by the large standard deviation factors for each budget item, budget fluctuations will vary widely from company to company. Some companies will actually be decreasing costs for certain items, and raising others much more substantially than reflected by the mean increases.

continued

figure 9

PRIMARY DRIVERS OF CHANGE	MANAGER	DIRECTOR	VP	TOTAL
Cost Reduction/ Controls	15.0%	13.9%	16.0%	15.0%
Customer Service	15.0%	11.1%	16.0%	14.0%
Structural Changes in Markets & Competition	10.0%	11.1%	8.0%	9.7%
Integrated Logistics Management	5.0%	19.4%	4.0%	9.5%
Inventory Management/JIT	10.0%	2.8%	12.0%	8.3%
EDI/Computers	5.0%	11.2%	8.0%	8.1%
Recognizing Importance of Logistics Mgmt.	0.0%	5.6%	16.5%	7.2%
International	10.0%	2.8%	4.0%	5.6%
Supply Chain Mgmt.	5.0%	8.3%	8.0%	7.1%

figure 10

SECONDARY DRIVERS OF CHANGE	MANAGER	DIRECTOR	VP	TOTAL
EDI/Computers	23.4%	15.2%	18.2%	18.9%
Customer Service	5.9%	27.3%	13.6%	15.6%
Structural Changes in Markets & Competition	11.8%	12.1%	4.5%	9.5%
Transportation	17.6%	6.1%	0.0%	7.9%
Cost Reduction/ Controls	0.0%	9.1%	13.6%	7.6%
Integrated Logistics Management	5.9%	3.0%	13.6%	7.5%
Recognizing Importance of Logistics Mgmt.	11.7%	6.1%	4.5%	7.4%
Human Resources	5.9%	3.0%	9.1%	6.0%
Inventory Management/JIT	5.9%	6.1%	4.5%	5.5%

figure 11

PRIMARY CONTINUING EDUCATION NEEDS	MANAGER	DIRECTOR	VP	TOTAL
Computers	28.6%	25.7%	26.9%	27.1%
Finance	23.8%	25.7%	23.1%	24.2%
Int'l Business	9.5%	5.7%	15.4%	10.2%
Strategic Planning	4.8%	11.4%	7.7%	8.0%
Marketing	9.5%	8.6%	0.0%	6.0%

figure 12

SECONDARY CONTINUING EDUCATION NEEDS	MANAGER	DIRECTOR	VP	TOTAL
Computers	23.8%	32.3%	12.0%	22.7%
Finance	14.3%	6.5%	12.0%	10.9%
Int'l Business	9.5%	9.7%	8.0%	9.1%
Strategic Planning	0.0%	6.5%	12.0%	6.2%
Communication Skills	4.8%	6.5%	4.0%	5.1%

Drivers of Change (figures 9 & 10)

When asked to identify the drivers of change that will affect future attempts to achieve a competitive advantage through logistics, respondents named cost controls, computers, and customer service. The manner in which EDI/computers jumped to the fore as a second choice (figure 10) attests to how integral computers have become to the implementation of all logistics objectives. Also, significant preferences for second choices emerged at the manager and director levels, with managers showing interest in operational forces such as transportation and EDI/computers, and directors clearly emphasizing the customer service factor. The "structural change" factor proved to be of great concern across all levels, reflecting continued wariness about the effects of mergers, acquisitions, diversifications, spinoffs, etc.

Continuing Education (figures 11 & 12)

Critical to the construction of any career path is development of the requisite skills and know-how needed to stay abreast of the changing demands tied to a particular discipline. Distribution executives' responses to questions about their first and second choices for continuing education topics made it clear again that computers and related technology really is the only choice. Finance, the runaway leader for many years, continues to fade as a priority, with new needs such as international business and strategic planning emerging as desired substitutes, particularly by higher-level respondents. One clear conclusion can be drawn from all of these responses: Logistics professionals already know all there is to know about "kicking boxes out the door"; they now need knowledge keys that can open far more formidable doors.

Skill Requirements (figures 13-15)

Responses provided by distribution executives from the various levels of management offer keen insight into the skill and knowledge areas that will shape the job profiles and career paths of future practitioners of the discipline. A

continued

figure 13

SKILL REQUIREMENTS—SENIOR EXECUTIVE		
SKILL/KNOWLEDGE AREA	**TODAY**	**1990**
Oral Communications Skills	1.56	1.67
Human Resources/Personnel	1.38	1.29
Transportation	1.25	1.02
Financial Analysis	1.20	1.36
Inventory Management	1.15	0.71
Quantitative Analysis	1.07	0.91
Negotiating Skills	1.07	0.80
Warehousing	1.00	0.56
Computer Systems	0.60	0.85
International Business	0.49	1.20

figure 14

SKILL REQUIREMENTS—2ND LEVEL MANAGER		
SKILL/KNOWLEDGE AREA	**TODAY**	**1990**
Transportation	2.24	1.70
Warehousing	1.69	0.93
Oral Communications Skills	1.19	1.37
Inventory Management	1.17	0.87
Human Resources/Personnel	1.09	1.09
Written Communication Skills	0.89	1.06
Computer Systems	0.96	1.09
Quantitative Analysis	0.85	1.13

figure 15

SKILL REQUIREMENTS—NEW HIRE		
SKILL/KNOWLEDGE AREA	**TODAY**	**1990**
Quantitative Analysis	1.76	1.85
Oral Communications Skills	1.75	1.76
PC Applications Analysis	1.60	1.58
Written Communication Skills	1.53	1.49
Transportation	1.51	0.87
Inventory Management	1.17	0.85
Computer Systems	0.84	1.24
Financial Analysis	0.84	1.00

figure 16

SOURCES OF INFORMATION—MEETINGS			
	MANAGER	**DIRECTOR**	**VP**
CLM National	28%	30%	26%
CLM Roundtable	13%	11%	6%
Industry Specific	22%	19%	25%
Non-Industry Specific	9%	10%	10%
Company Sponsored	17%	19%	17%
University Sponsored	10%	9%	10%
Other	1%	2%	7%
Total	100%	100%	100

figure 17

SOURCES OF INFORMATION—PUBLICATIONS			
	MANAGER	**DIRECTOR**	**VP**
Business Newspapers	20%	20%	21%
Trade Magazines	39%	38%	28%
Journals	10%	11%	13%
Video/Audio Tapes	5%	7%	7%
Subscription Newsletters	13%	10%	12%
Association Newsletters	13%	13%	14%
Other	0%	1%	5%
Total	100%	100%	100

score of 0.75 indicates average importance; above that, greater importance. Senior executives placed the greatest priority on the development of oral communication skills. This is a far cry from the days when distribution managers were expected to sit in a shipping room corner and be neither seen nor heard. Senior executives also put a premium on developing human resources/personnel skills, again emphasizing the new corporate priority to maximize return on human capital.

Beyond these basic abilities, senior execs said the future will create far greater requirements for skills/knowledge in international business, financial analysis, and computer skills. Basic distribution skills will decrease in importance, as will the need to develop negotiating skills. For second-level managers, the senior level executive drew up skill and knowledge requirements that were more directly related to traditional logistics functions. But even for this group, there is a heightened emphasis on communications and human resources skills. Finally, senior-level executives depicted skill requirements for newly hired employees, emphasizing analytical and communications skills, with a high-tech orientation.

Sources of Information (figures 16 & 17)

Feedback about the value of information gleaned from meetings and publications showed that there is an increased emphasis on relating the logistics field to a company's specific industry. Executives now seem to be striving to allocate their available meeting time between gatherings of "horizontal" groups such as CLM, which discuss a specific management discipline (logistics) that cuts across all industry lines, and "vertical" gatherings of, for example, food or chemical associations. Often these industry-specific meetings will have a special logistics orientation. On the publication side, trade magazines specifically focused on logistics issues continue to be preferred at all levels, augmented by a variety of supplementary media outlets. ★

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NOTE

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37, 88

CHILTON'S

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THE TRANSPORTATION & BUSINESS LOGISTICS MAGAZINE DECEMBER 1987

WA L SECTION
USING CASE STUDIES

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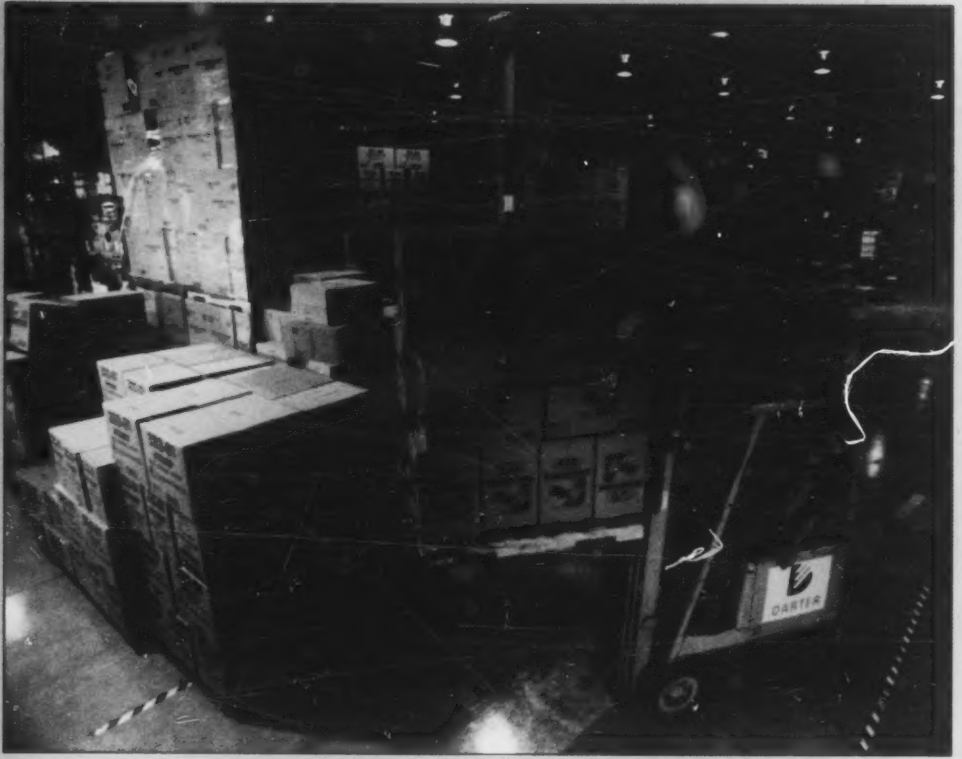
Warehousing as a Logistics Tool



SOLID SYSTEMS FOR FREIGHT PAYMENT

THE INTERMODAL LIABILITY MESS

VOL. 86, NO. 12

CHILTON'S

DECEMBER 1987

DISTRIBUTION

COVER STORY

10 WAREHOUSING AS A LOGISTICS TOOL
A two-part look at how shippers are utilizing private and public warehouses to maximize return on assets and contribute to corporate profitability.

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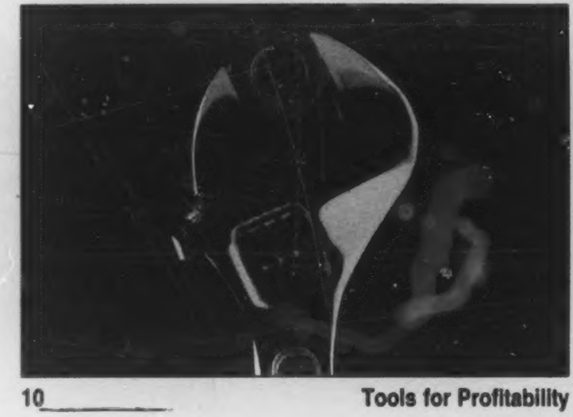
Tired of overcharges, duplicate bills, and carriers screaming for their checks? Here's a look at four freight payment alternatives that can make your life a little simpler.

28 THE INTERMODAL LIABILITY MESS
The loopholes in intermodal liability rules are tough to keep track of. Protect yourself by knowing what's in those railroad exempt circulars.

35 STATISTICAL FOCUS
Freight tonnage statistics for cargo handled at North American Ports.



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NEXT MONTH

3rd Party Logistics

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DIALOGUE

I'D PAY HIGHER FREIGHT RATES IF...

Would you be willing to pay higher freight rates? That's what we asked you in our October Dialogue feature, and, while a few of you said you wouldn't under any circumstances, most of you said you would—for the right reasons.

"I'd be willing to pay higher freight rates if the level of service was commensurate with the premium rate level. My company uses general commodity carriers that offer little or no discount. Others who offer F.A.K./discount combinations are shunned. Why? Consistency of service."—**James V. Baker, International distribution mgr., Oscar Mayer Foods Corp., Madison, Wis.**

"I'd be willing to pay higher freight rates if the carriers asking for those increases knew their costs well enough to justify the increase and were able to honestly and openly convey that justification to us."—**Doug Knupp, traffic mgr., Copeland Corp., Sidney, Ohio.**

continued

The frequency and level of rate discounting is increasing	67%
decreasing	33%
My management expects me to secure a certain discount level.	46%
management does not expect a certain discount	54%
A general rate bureau increase of 4% translates into an effective increase for my company of:	
4 percent	39%
3 percent	15%
2 percent	27%
1 percent	7%
0 percent	22%
The best way to avoid the impact of rate bureau increases is to:	
concentrate freight among cooperative carriers	36%
be a tough negotiator	31%
play one carrier off against another	6%
other	18%
In what areas are rates going up most?	
LTL interstate	63%
LTL intrastate	23%

QUESTION OF THE MONTH

MANAGEMENT BY CONTRACT

More than 60 percent of all rail traffic moves under contract arrangements. The percentage is similar for truckload movements. In ocean transportation, service contracts are fast becoming the preferred way to ship, even for relatively small shippers. And in the warehousing industry, contract arrangements are the fastest growing part of the business.

Why are so many shippers buying their logistics services through contracts? Is it just a matter of price negotiation? Do shippers really need special contracts to get the service they want?

This month, we want to know how the use of contracts has affected your business. What is your company trying to accomplish through its use of contracts?

Have you encountered problems with managing your logistics contracts that other shippers should look out for? What is your role in the negotiation and monitoring of carrier contracts? Do you get directly involved? Finally, is there an innovative way you use contracts to manage your logistics operation?

DIALOGUE

December 1987

• Five years ago, ______percent of our transportation and logistics services were purchased under contracts.

• Today, ______percent of our transportation and logistics services are purchased under contracts.

The primary goal of our contracts is to (check one)
______Leverage volume to lower rates
______Assure equipment availability
______Establish required service levels
______Integrate the carrier/warehouse with our logistics strategies
______Other ______________________

The main problems we have experienced with contracts are:
______Vendor inability to comply with contract terms
______Our own inability to meet volume requirements
______Subsequent disagreement on interpreting terms
______Failure to include certain provisions such as liability, force majeur, etc.
______Other ______________________

• Do you get directly involved in the negotiation and formulation of contracts for transportation and logistics services? ______Yes ______No.

One innovative way in which we use contracts to manage our transportation and logistics services is:

NAME (print) TITLE
COMPANY PHONE
ADDRESS
CITY STATE ZIP

FIGURES IN SPEECH

(Quotes from transportation and distribution notables that have caught the ears of DISTRIBUTION editors:)

"It's un-American to manufacture things. Asians manufacture things. Americans acquire, divest, merge and file for bankruptcy."—**Russell Baker, columnist.**

•

"Now isn't *that a sad* commentary on today's fast buck, don't-get-your fingernails-dirty society? And isn't it also a sad commentary on America's ability to compete? 'Competitiveness,' of course, is the big buzzword of the year.... My only worry is that, like so many other buzzwords, it might become a cliche before it becomes a reality."—**Gerald Greenwald, chairman, Chrysler Motors Corp.**

•

"In today's transportation world, the prompt, smooth, steady flow of information is the key to expeditious cargo movements. The old philosophy was to control the cargo, and if there was a problem with a transaction during a certain phase, the shipper would handle it then. The new philosophy is to control the information relative to the cargo movement, and you'll control the cargo movement."—**Joseph P. Monaghan, national account executive, Fritz Companies, Inc.**

FREIGHT RATES continued from p. 7

"I'd be willing to pay higher rates if I never had to fill out another freight claim form, and service was always within one day of the date published and promoted by carrier sales reps."—**Perry E. Sprague, vice president, Brown Cargo Van Inc., Lawrence, Kan.**

"I'd pay higher rates if I didn't have a choice, our competitors also paid more, or the higher rates guaranteed service that would produce savings equal to or greater than the increase."**John Olson, warehouse mgr., Hitachi Sales Corp., Elk Grove, Ill.**

"I'd pay higher rates if quicker service were offered and that service was easily monitored through a top-notch EDI package."—**Steven L. Bullard, corporate traffic mgr., Block Industries, Wilmington, N.C.**

"I'd be willing to pay higher rates if the service we received was as good as promised in the sales pitch. But if a carrier offers discounts of 50 percent or more, then rates are exorbitant to begin with. Realistic pricing is what's needed."—**Rodger Wills, traffic mgr., Young Radiator Co., Racine, Wis.**

"I'd pay higher rates if I was guaranteed better delivery and service than what the other carriers are offering. Lately, it seems like you get what you pay for, and when carriers offer you a 60-65 percent discount, what can you expect?"—**Cynthia Benore, traffic mgr., Floating Floors, Inc., Toledo, Ohio.**

"I am not willing to pay higher freight rates under any circumstance. If rates continue to increase I may start up my private fleet again."—**Stephen W. Young, transportation mgr., Huffy Corp., Celina, Ohio.**

"I would not be willing to pay higher rates unless equipment capacity decreases in the market."—**G. Van Kell, mgr., motor transportation, Morton Salt, Chicago.**

"I don't think anybody is willing to pay a higher freight rate unless they are forced to. We are already getting good service and good rates. What more could you ask for?"—**Thomas Doyle, rate analyst, Meridian Traffic, Quincy, Mass.**

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STATISTICAL FOCUS

NORTH AMERICAN PORTS, GROSS FREIGHT TONNAGE – EXPORT

	1986	1985	Change
North Atlantic	69,018	78,201	−8,400
Portland (ME)	63	22	+41
Portsmouth	298	163	+135
Boston	503	757	−254
Providence	499	241	+258
New Haven	251	252	−1
New York	6,183	5,815	+368
Albany	132	354	−222
Camden	1,129	954	+175
Philadelphia	4,220	5,609	−1,389
Wilmington (DE)	300	489	−189
Baltimore	10,500	13,961	−3,461
Hampton Roads	44,220	48,769	−4,549
Richmond (VA)	164	102	+62
South Atlantic	13,666	14,514	−848
Morehead City	347	1,156	−809
Wilmington (NC)	687	680	+7
Charleston	3,762	3,733	+29
Savannah	3,948	3,940	+8
Brunswick	235	208	+27
Jacksonville	340	906	−566
Canaveral	176	108	+68
Palm Beach	867	649	+218
Everglades	329	275	+54
Miami	1,041	1,150	−109
San Juan	578	545	+23
Gulf	134,752	143,865	−9,113
Tampa	1,005	11,066	−10,061
Panama City	364	344	+20
Pensacola	327	336	−9
Mobile	11,069	11,403	−334
Gulfport	236	353	−117
Pascagoula	2,837	2,210	+627
New Orleans	22,757	23,182	−425
Baton Rouge	14,556	12,868	+1,688
Gramercy	27,997	29,166	−1,169
Destrehan	8,098	8,462	−364
St. Rose	6,778	6,906	−128
Lake Charles	4,132	2,952	+1,180
Beaumont	3,365	1,858	+1,507
Port Arthur	2,529	2,727	−198
Galveston	3,930	4,785	−855
Texas City	1,379	1,555	−176
Houston	17,563	17,411	+152
Freeport	1,005	973	+32
Corpus Christi	3,820	3,975	−155
Brownsville	286	202	+84
South Pacific	30,701	30,009	+692
San Diego	371	613	−242
Long Beach	9,097	9,370	−273
Los Angeles	8,230	7,499	+731
Hueneme	44	284	−240
San Francisco	602	427	+175
Oakland	2,745	3,019	−274
Richmond (CA)	3,221	2,289	+932
Redwood City	213	221	−8
Stockton	275	396	−121
Sacramento	593	981	−388
Honolulu	349	820	−471
North Pacific	50,821	51,204	−383
Astoria	399	695	−296
Coos Bay	4,129	4,329	−200
Portland (OR)	11,571	8,568	+3,003
Vancouver	281	2,641	−2,360
Longview	6,834	5,195	+1,639
Kalama	1,657	4,216	−2,559
Grays Harbor	2,718	3,523	−805
Everett	1,613	1,476	+137
Bellingham	929	1,034	−105
Anacortes	779	615	+164
Port Angeles	2,312	2,112	+200
Olympia	299	447	−148
Seattle	4,120	3,571	+549
Tacoma	6,741	6,907	−166
Anchorage	3,166	2,975	+191
Great Lakes	31,987	34,210	−2,223
Ogdensburg	1	18	−17
Oswego	–	3	−3
Buffalo	92	172	−80
Duluth/Superior	5,389	4,598	+791
Milwaukee	272	694	−422
Green Bay	50	56	−6
Detroit	909	684	+225
Chicago	929	1,030	−101
Cleveland	555	510	+45
Toledo	5,976	7,328	−1,352
Ashtabula	2,630	3,441	−811
Conneaut	5,064	5,500	−446
Sandusky	2,857	2,902	−45
Erie	77	76	+1

Source: American Association of Port Authorities

STATISTICAL FOCUS

NORTH AMERICAN PORTS, GROSS FREIGHT TONNAGE—IMPORT

	1986	1985	Change
North Atlantic	168,156	147,360	+20,796
Portland (ME)	4,181	4,703	−522
Portsmouth	1,567	1,154	+413
Boston	10,586	6,852	+3,734
Providence	2,391	1,360	+1,031
New Haven	3,062	2,261	+801
New York	52,637	48,908	+3,792
Albany	2,626	1,558	+1,068
Camden	1,760	682	+1,078
Philadelphia	22,121	18,698	+3,423
Wilmington (DE)	9,619	9,948	−329
Baltimore	14,168	12,135	+2,033
Hampton Roads	8,394	8,305	+89
Richmond (VA)	142	179	−37
South Atlantic	47,776	42,760	+5,016
Morehead City	541	329	+212
Wilmington (NC)	2,369	2,136	+233
Charleston	3,509	3,059	+450
Savannah	5,840	5,284	+556
Brunswick	947	1,069	−122
Jacksonville	3,596	3,342	+254
Canaveral	1,424	1,464	−40
Palm Beach	759	730	+29
Everglades	3,579	2,730	+849
Miami	1,693	1,374	+319
San Juan	4,432	4,543	−111
Gulf	171,324	141,012	+30,312
Tampa	5,436	4,671	+765
Panama City	60	65	−5
Pensacola	123	149	−26
Mobile	7,136	6,703	+433
Gulfport	739	844	−105
Pascagoula	11,863	8,275	+3,588
New Orleans	16,832	14,545	+2,287
Baton Rouge	8,921	6,888	+2,033
Gramercy	10,981	7,942	+3,039
Destrehan	200	123	+77
St. Rose	1,133	428	+705
Lake Charles	13,992	10,495	+3,497
Beaumont	4,615	8,913	−4,298
Port Arthur	8,542	6,437	+2,105
Galveston	1,247	1,045	+202
Texas City	16,329	12,916	+3,413
Houston	31,523	23,579	+7,944
Freeport	4,307	5,027	−720
Corpus Christi	23,602	17,987	+5,615
Brownsville	192	319	−127
South Pacific	36,174	35,247	+927
San Diego	620	770	−150
Long Beach	9,991	11,430	−1,439
Los Angeles	10,408	9,472	+981
Hueneme	334	940	−606
San Francisco	1,103	882	+221
Oakland	2,739	2,447	+292
Richmond (CA)	2,080	1,665	+415
Redwood City	87	62	+15
Stockton	441	305	+136
Sacramento	45	214	−169
Honolulu	3,559	3,662	−103
North Pacific	16,496	16,057	+439
Astoria	79	19	+60
Coos Bay	7	1	+6
Portland OR)	2,277	2,356	−79
Vancouver	577	798	−221
Longview	782	742	+40
Kalama	46	25	+21
Grays Harbor	5	–	+5
Everett	535	525	+10
Bellingham	1,056	1,160	−104
Anacortes	1,152	1,312	−160
Port Angeles	177	170	+7
Olympia	7	11	−4
Seattle	4,901	5,032	−131
Tacoma	3,978	2,874	+1,104
Anchorage	302	51	+251
Great Lakes	13,843	17,111	−3,268
Ogdensburg	4	13	−9
Oswego	403	397	+6
Buffalo	309	299	+10
Duluth/Superior	494	500	−6
Milwaukee	502	530	−28
Green Bay	205	257	−52
Detroit	2,168	2,447	−279
Chicago	2,448	3,005	−557
Cleveland	2,386	2,846	−460
Toledo	1,646	1,691	−45
Ashtabula	545	548	−3
Conneaut	28	94	−66
Sandusky	–	–	–
Erie	181	338	−157

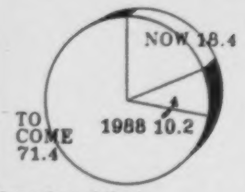
Source: American Association of Port Authorities.

SURVEY REVEALS UNTAPPED MARKET

A recent survey conducted for Telxon Corporation, one of the largest producers of hand-held microcomputer systems, shows some interesting results. Since its inception, the use of bar coding and electronic point of origin data collection continues to surge. Also, the technology is spreading beyond its grocery genesis to develop stronger appeal in other industries. However, the survey reveals a vast, still largely untapped market.

According to Telxon VP of Marketing Thomas Kinch, only 18.4 percent of the companies contacted are currently using bar coding or some other form of auto ID; 75.5 percent of respondents who identified themselves as current or future users recognize the increasing importance of some form of electronic point-of-origin data gathering in enhancing productivity, control and overall efficiency.

THE FUTURE



Source: Cormier & Church

Another 10% of businesses in the U.S. plan to install electronic point-of-origin data collection within the next 12 months. Almost all of the remaining two-thirds are in fields where competition is or will be using these systems, and will be forced to consider them to stay competitive.

CURRENT USES

SALES MANAGEMENT	38%
WAREHOUSING	35%
DISTRIBUTION	32%
ADMINISTRATION	19%
PROD. CONTROL	15%

Source: Cormier & Church

Among users, electronic point-of-origin data applications are today concentrated in five categories, with most firms reporting multiple uses.

The survey also found that top management support for extending data to the field or factory or warehouse has dramatically increased. And the expansion of applications for current users and new applications by non-users suggest significant growth for a marketplace currently estimated at $500 million a year.

Eden
AIR FREIGHT INC.

A NEW HAT IN THE AIR FREIGHT FORWARDING RING

Lawrence L. Rodberg has landed on his feet as president and CEO of Eden Air Freight, a new air freight forwarding firm based in Irvine, Calif. Eden will service every airport city in the U.S., capitalizing on the scheduled airlines' huge available lift to provide same-day, next-day and second-day delivery of all weights and sizes.

A pure air freight forwarder, stations are located in Atlanta, Boston, Chicago, Dallas, Denver, Honolulu, Los Angeles, New York, Newark, San Diego, San Francisco and Seattle.

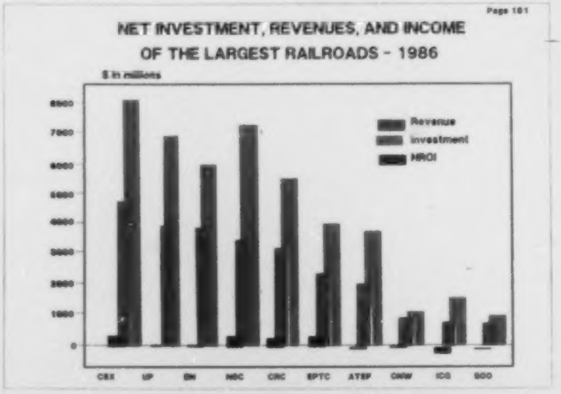
SHIPPERS RECOGNIZE QUALITY CARRIERS

Orient Overseas Containerline (OOCL) has received the first award Montgomery Ward has ever offered to a carrier.

Lee J. Heisler, Montgomery Ward's international division manager, presented the award to Ibrahim Hur, OOCL's director of marketing. OOCL was recognized for 10 years of consistent, high quality service between the U.S. and Asia.

Storage Technology Corp., which manufactures and markets information storage and retrieval subsystems for high-performance computers, also honored several carriers for providing distinguished service in their particular traffic lanes.

The awards were given to representatives of Boulder-Denver Trucklines (BDT), Burlington Air Express, Emery Worldwide, Bob Martin Trucking in Minneapolis, Aero-Mayflower Transit (Denver agent: Buehler Moving and Storage), and United Van Lines (Denver agent: Johnson Moving and Storage).



HERE'S HOW CLASS 1 RAILROADS DID LAST YEAR

The Association of American Railroads' Economic and Finance Department has released its annual Analysis of Class 1 Railroads. The ninth annual edition of the study includes financial and operating statistics, traffic averages and percentages, operations and employment data, fuel consumption, net worth, and replacement of plant and equipment. Copies of the analysis, as well as the previous eight installments, are available from the AAR. Circle 523 on the Reader Service Card.

NEW JOB FOR VIDRICK

Bob Vidrick, longtime member of DISTRIBUTION's Editorial Advisory Board, has retired from Robertshaw Controls where he was director of corporate transportation. Bob has opened his own logistics consulting firm in Richmond, Va. Bob's practice will cover both international and domestic logistics, and he will continue to contribute to DISTRIBUTION. Bob can be reached at (804) 740-3933.

10 COMMANDMENTS FOR THE WAREHOUSE

In the spirit of our warehousing issue, we bring you these commandments from Distribution Center Management, Silver Spring, Md.:

1. Thou shalt not have a late order, nor ship incorrect or incomplete orders.
2. Thou shalt honor thy customers' requested ship dates.
3. Thou shalt ship clean and undamaged product.
4. Thou shalt follow packing and palletizing instructions.
5. Thou shalt mark and label as instructed.
6. Thou shalt maintain good order and square loads in floor stacks and racks alike.
7. Thou shalt not suffer spillage, moisture or other contaminants on the warehouse floor.
8. Thou shalt not permit access to the warehouse to any except authorized personnel.
9. Thou shalt report immediately any problems concerning safety or security.
10. Thou shalt maintain thy warehouse areas as if thy job depended on it—because it does.

NEED WAREHOUSING/ DISTRIBUTION HELP?

If you're having trouble keeping the 10 commandments above, these two companies may be able to help:

Allied Distribution Inc., represents warehousemen across the U.S. and Canada. For "cost free" distribution assistance, contact Ernie Brunswick or Bill Fitzgerald (312) 957-2113. East Coast customers may call (800) 832-5432.

Trammell Crow Distribution Corporation can also help you with your full-service distribution needs. They can be contacted by phone or mail: Trammell Crow Distribution Corp., P.O. Box 110895, Carrollton, TX 75011. (214) 416-9203.

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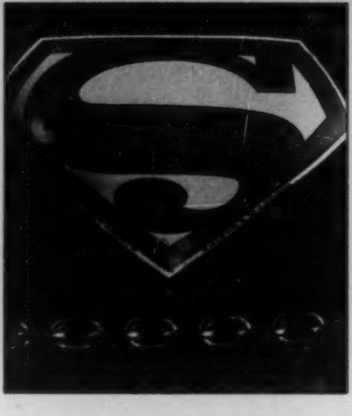
VOL. 87, NO. 1

COVER STORY



28 THIRD PARTY LOGISTICS: SUPER ALLY OR WEAK LINK?

Third party logistics services are driving a wedge through the field of transportation and distribution management. Just when it seemed there was a brighter future, and higher status, for traffic professionals within American companies, independent suppliers of logistics services have launched a marketing onslaught which could permanently alter the way many businesses handle their logistics.

FEATURES

41 UNION CARBIDE: LOOKING FOR A FEW GOOD CARRIERS

Union Carbide has improved relations with its customers by building a partnership between itself and a small network of quality haulers.

46 CASEBOOK: SAVVY STRATEGIES FOR INTERNATIONAL LOGISTICS

56 THE TRANSPORTATION/PURCHASING INTERFACE

How well these two groups work together will be the key to productivity and profitability as logistics looks to the 1990s.

62 BEHIND THE MAGIC KINGDOM

It isn't Tinkerbell that keeps Disneyland's multi-million dollar consumer business humming. It's a basic, no-frills, labor intensive warehouse operation.

66 THE BIG ISSUES FOR '88

The transportation and distribution industry faces big challenges in the year ahead, from continued job insecurity to possible disruption of rail service.

72 LOGISTICS TOOLS: HOW TO CALCULATE THE COST OF OUTSOURCING

To make the in-house vs. outsource decision, you need to work with the right numbers. Here's how to get them.

78 SOFTWARE REVIEW: BN's SHIPSMART

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LOGISTICS TRENDS

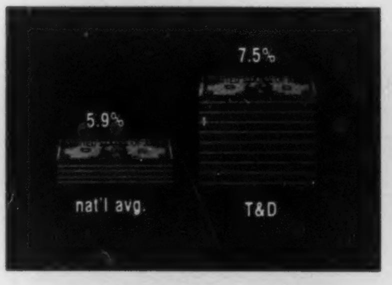
Distribution managers got better raises than most last year

Distribution managers got bigger raises than most executives in 1986. Salaries for top transportation, distribution and logistics executives increased 7.5 percent, compared to the national average of 5.9 percent. The top distribution executive in the 47 firms surveyed averaged $120,942 in total compensation. That's the word from a California consulting firm that recently published the results of a nationwide compensation survey.

Major industries represented in the survey – conducted by DGM Associates of Pacific Palisades – are pharmaceuticals, food and beverage, and wholesale/retail. The survey covers total compensation for each position (with and without bonus) and differentiates between organizations (corporate, group/division, subsidiary), sales volume, and industry grouping.

Copies of the 126-page report, which contains an executive summary and numerous charts and graphs, are available from DGM Associates.

Write in #512 on Reader Service Card

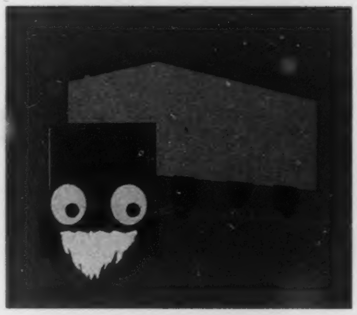


The graying of the food fleet

Massive transportation equipment purchases await many food distributors, says a college professor who has spent a year analyzing the wholesale grocery and foodservice distribution business.

"Clearly, the choice to buy new equipment may soon no longer be a choice but an imperative," says Prof. Scott Ames, of Southern Methodist University. Despite an increase in productivity, thanks to the use of computers and driver training, Ames says "The day of reckoning is upon us. A lot of those guys should be talking to their bankers."

Among Ames' findings: 10-year-old trucks, many past the point of optimum utility, are common in the food distribution business. Many were bought in the early 1970s, during a period of great expansion. As a result, we are witnessing the "graying of the food fleet," Ames says, and many firms must now face the task ~~of updat~~ing their delivery fleets, either by purchase or lease.



Distribution costs fall, and rise, in 1987

According to management consultant Herbert W. Davis, average total distribution costs as a percentage of sales amounted to 8.01 percent in 1987. This was a reduction of 4.2 percent from 1986 distribution costs. Davis adds, however, that distribution dollars spent per hundred pounds of product distributed increased 4.4 percent, for an average of $36.87/cwt. "The difference in the performance figures basically indicates that many of the companies we chart in our *Database* were rescued by higher product prices and were not really practicing sounder distribution management," says Davis. The cost category that increased the most was administration. Davis attributes this increase to more corporate resources being directed toward planning and containing distribution costs. More information is available from Herbert W. Davis and Co., 111 Charlotte Place, Englewood Cliffs, NJ 07632 (201-871-1760). Or, write in number **513** on the reader service card.

Overall Cost Average for 151 Companies in Davis Database

	Dist. cost in	
	% of sls	$/cwt
Finished Goods Trans.	3.26	10.61
Warehousing	1.91	9.08
Order Processing/ Customer Service	0.82	5.75
Distrib. Admin.	0.42	2.17
Inventory Carrying Cost @ 18%	1.83	10.66
Other	0.43	1.29
Total Dist. Cost	8.01	36.87

A tough act to follow at Conrail

Conrail chairman L. Stanley Crane, who led the railroad from near oblivion as a government ward to become one of the healthiest railroads in the country, is stepping down. The railroad expects to have a new chief executive in place by the end of March. Three internal candidates are reportedly being considered, as well as several executives from outside Conrail. Crane, 72, started at Conrail January 1, 1981 shortly after retiring as chairman of the Southern Railroad, where he had spent 40 years. In his years at Conrail, Crane drastically cut costs and increased marketing efforts, especially in the area of intermodal. Crane's greatest achievement was thwarting the Reagan administration's plan to sell Conrail to the Norfolk Southern; instead, Crane established Conrail as an independent company through a public stock offering.

CHILTON'S
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THE GUILTY SHIPPER

Carriers Point The Finger

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CONGRESSIONAL INF SERVIC
4520 EAST WEST HIGHWAY
BETHESDA MD 20814

Private fleets make the grade

Lotus 1–2–3 for logistics

A negotiations primer

FEBRUARY, 1988

CHILTON'S
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THE TRANSPORTATION & BUSINESS LOGISTICS MAGAZINE

VOL. 87, NO. 2

COVER STORY

28 THE GUILTY SHIPPER: CARRIERS POINT THE FINGER

In recent months, there's been a lot of discussion about that fateful day when a growing driver shortage, outrageous insurance expenses and a few more bankruptcies will pave the way for motor carriers to rise from their submissive posture and wreak swift judgment on those shippers that have ruthlessly squeezed them since early in the decade. Unlikely? Maybe, but the possibility belies some nasty realities about the way shippers use and abuse their carriers. Are we talking about your company here?

FEATURES

38 LOTUS 1-2-3 FOR LOGISTICS: A POWERFUL SWEET SOLUTION

This basic software package isn't just for number-crunching accountants any more. Here are two companies that have applied it successfully to a number of logistics problems.

46 THE BEST APPROACH TO INTEGRATED LOGISTICS

First Best Foods reorganized. Then it worked out a forecasting method to make its DRP system fly. Logistics holds it all together.

50 CASEBOOK: PRIVATE CARRIAGE

62 LOGISTICS TOOLS: TRANSPORTATION NEGOTIATION

Everything is negotiable in transportation today, but if the shipper is to come out a winner, he must have the skills that carrier reps are bound to possess.

66 SOFTWARE REVIEW: MICROANALYTICS' OPTISITE

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Next Month: ***Managing Your Career***

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LOGISTICS TRENDS

Miles to go before we're integrated

The conclusion of a survey conducted in 1987 by consultant Craig M. Gustin and Golden State University is that logistics has held its own in regard to computer systems implementation during the last five years and made advances in specific areas. However, the report reveals that much remains to be done.

The study followed up on a 1982 survey. Among the trends identified over the last five-year period, Gustin reports a persisting difficulty in integrating the logistics function with other departments. The 1987 study indicated no significant progress toward integration in the last five years.

An increasing need for inbound transportation and purchasing systems was also indicated by users, as was a desire for more computer support for daily routines, as opposed to strategic planning.

PROGRESS IN INTEGRATION

Level of implementation	1982	1987
Concept has not been recognized	24%	25%
Concept recognized but no decision to implement	20%	20%
Recognized and adopted but not successfully implemented	29%	26%
Adopted and successfully implemented	27%	29%

Over the past five years, recognition and acceptance of the integrated logistics concept has not increased, and there has been only a modest improvement in the success rate of new users.

Roll a six to cut inventory costs

Its sales probably won't rival those of *Trivial Pursuit*, but a new Just-In-Time Simulation Board Game, developed by a French consulting Group, is an indication of how popular the zero-inventory production process has become among logistics planners. The game is designed to teach corporate managers the techniques of just-in-time manufacturing. Players build six different products by moving them through five work stations using a number of different production techniques. As they play, managers learn to develop production schedules, calculate inventory levels, and assign ***kanban*** cards. Interested? Competition shouldn't be hard to find. Managers already playing the just-in-time game represent such manufacturing giants as TRW, Hewlett-Packard, Peugeot, Renault, and 15,000 others in Europe and North America.

UPS tops list of most admired transportation companies

For the second straight year, United Parcel Service ranked first among transportation companies in *Fortune Magazine's* survey of the nation's most admired companies. Criteria included such things as management quality, service, and profitability. The top 10 transportation companies listed: 1. UPS, 2. AMR, 3. Delta Airlines, 4. Norfolk Southern, 5. Union Pacific, 6. Burlington Northern, 7. CSX 8. Santa Fe Southern Pacific, 9. Allegis, 10. Texas Air.

Additional kudos are in order for Roadway Services and Allegis, which were tapped by *Forbes* magazine as 1987's most innovative companies.

Air freight trends: two extremes

Where's the money being made in air freight today? According to Dave Beatson, managing director, freight sales for American Airlines, the hot products are deferred service, usually second day, and, at the other end of the service spectrum, same day service. "Deferred service gives the shipper fast, reliable door-to-door delivery at 30 to 40 percent less than next day service," Beatson says, "and it gives us hundreds of routing options." There also is an increased demand for American's same day service, Beatson adds, for companies on deferred service schedules that have emergencies.

The field of freight payment players shrinks again

Barry & Lloyd, based in Norwood, Mass., has quietly built itself into one of the foremost providers of freight bill auditing and payment services. With the recent signing of a big contract with General Electric and the acquisition of the freight management services division of Ameritrust, Barry & Lloyd figures to process $1 billion in freight bills this year. "This type of growth is something we will tightly control," says marketing director Bud Tackett. The acquisition of Cleveland-based Ameritrust allows Barry & Lloyd to expand into the Midwest with a solid base of loyal clients, Tackett says.

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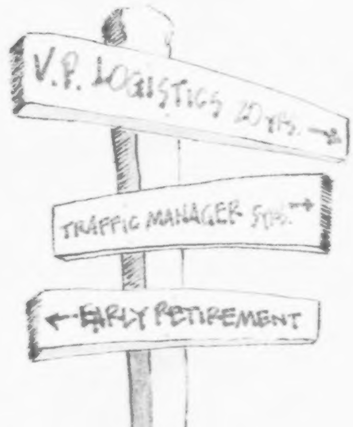
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Buyer's Guide to Freight Payment Services

GM's JIT Solution

When Short Lines Make Sense

MARCH, 1988

CHILTON'S
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VOL. 87, NO. 3

COVER STORY

28 CAREER WASTELANDS

There will always be sad tales from the distribution desert; the scattered bones of undirected sorts who wandered into our discipline and never found its lush oases. But most of us now know that the field is not a dead end. We've seen salary surveys which show how quickly you can fill your canteen from the distribution well. What we need now is a good path, so we don't trudge around aimlessly.

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When every additional inventory turn means saving $1 million, JIT becomes serious business. GM has found a few solid carriers to help make the system work.

41 HOW SHIPPERS VIEW CARRIER NEGOTIATIONS

Shippers need more from upper management than just the boss's best wishes.

48 HOW TO KEEP YOUR RAIL SERVICE ROLLING

More and more shippers are finding that abandoned track doesn't necessarily mean the end of the line for their rail service.

60 CASEBOOK: AIR FREIGHT

66 WHAT DOES YOUR INVENTORY REALLY COST?

The way you pay your suppliers, and the way they pay you, can make a big impact on the bottom line. Here's why the guys in finance act the way they do.

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LOGISTICS TRENDS

Do it for the money

Deficit schmeficit. Don't export to improve the U.S. trade deficit. Do it to make money.

That was Beacon Council President Tom Ferguson's simple message to a group of New York Rotarians recently. Ferguson says it's worked for Florida. The region's trade boom with Latin America during the 1970s and early 80s fell apart because of the oil glut, but "instead of moaning and groaning, we began to explore other international markets, especially Western Europe and the Far East, including luring Western European companies to use Greater Miami as a major Western Hemisphere distribution center."

FRANCE
DIX FRANCS

Ferguson also offered five tips for exporters:

- **Take an active role, rather than a passive one**. If you're going to sell internationally, you have to not only be the best, you have to market the best.
- **Understand they are different than we are**. Learn the idiosyncracies of dealing with foreign business people.
- **Make a long term commitment**. Once you get into international business, stay there.
- **Have an international business plan**. Don't make international business an afterthought to your domestic efforts. Make it a separate specialty.
- **Lean on other people's brains and budgets**. If you go international, lots of people will be willing to help you and, in some cases, pay some of the bills. Find them.

One place to look is the federal government, which recently published the *Exporter's Guide to Federal Resources for Small Business*. The guide identifies individuals in various federal agencies who can provide technical support to small business owners interested in international trade. For your copy, send $3.50 to Dept. 36-XK, Superintendent of Documents, Washington, D.C. 20402-9325. Specify stock number 045-000-00248-9.

Jobs: They're still out there

In 1984, a study by Syracuse University Professor Paul H. Zinszer determined that colleges graduated some 2,500 logistics majors, while at the same time, businesses hired 4,500 entry level employees in logistics functions. Zinszer's study also predicted that by this year, the academic supply of logistics grads would finally outstrip the industry demand (see chart). Yet Zinszer asserted that this would not appreciably close the gap between the number of grads and the number of entry level logistics positions available. "Starting salaries have remained strong," he says, "and will continue to be high relative to other business school disciplines."

The Council of Logistics Management, which sponsored Zinszer's study, also is doing its part to improve the lot of logistics students. CLM (312-574-0985) will award up to nine scholarships this year for students intent on a career in logistics. April 1 is the deadline, so don't delay.

GROWTH RATE IN LOGISTICS EMPLOYMENT

	demand	supply
last 3 years		
Undergrad	39%	9%
Masters	50%	12%
next 3 years		
Undergrad	13%	18%
Masters	5%	16%

Delaney, Hazard receive Salzberg Medallions

Syracuse University's Salzberg Medallion, presented annually to outstanding men and women in the field of transportation and logistics, has been awarded to Robert V. Delaney and John L. Hazard.

Delaney, who recently joined Arthur D. Little, Inc. as director of the consulting firm's freight transportation practice, will be honored as a practitioner. He has held positions with Monsanto Textiles Co., Maryland Cup Corp., Pet Inc., International Paper, Leaseway Transportation and Ernst & Whinney. Hazard, professor in the marketing and transportation administration department at Michigan State University, will receive an honorary medallion, given to an academician or policy maker in the field of transportation management. He has served the federal government as chief economist for the St. Lawrence Seaway Development Corp., and as assistant secretary of transportation for policy and international affairs.

LOGISTICS TRENDS

Meet us in Atlanta

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Are you trying to put an intermodal network together?

If so, you ought to attend the International Intermodal Expo '88, opening April 19 at the Georgia World Congress Center in Atlanta. The heavy hitters in the intermodal industry will be there, and you'll have an opportunity to see and hear about the latest in intermodal technology and strategy. The Expo also presents the ultimate climate for making the contacts needed to build a successful intermodal transportation system. For information call (404) 524-7777.

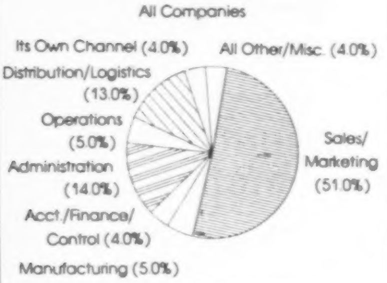
Deregulation only half done

If it moves, regulate it; if it moves fast, investigate it; but if it doesn't move at all, subsidize it.

That, says Rep. Tom DeLay (R-TX), has been Congress' philosophy on transportation regulation. "The $100 billion saved by current deregulatory legislation has proved this attitude to be wrong, and we have to finish the job," DeLay told attendees at a recent Washington seminar. DeLay promised equally dramatic savings to shippers and the general public from complete trucking deregulation as called for in the DeLay/Moody/Packwood bills (H.R. 2591 and S. 1710).

Virtually all speakers at the seminar called for defeat of the rail regulatory bills (S. 676 and H.R. 1393) supported by coal and electric utility interests. Darius Gaskins, president of the Burlington Northern Railroad, said that railroads are still overburdened by federal regulation, and he delivered a call to free the railroads from the Railway Labor Act (allowing secondary boycotts and hindering direct management-labor wage negotiations), the Federal Employer's Liability Act (requiring costly and time-consuming litigation instead of a workmen's compensation system for injured rail workers), and the Railroad Retirement Act (requiring the railroads to pay retirement benefits for a growing list of retirees using payments from a shrinking labor force).

ORGANIZATIONAL CHANNEL THROUGH WHICH CUSTOMER SERVICE REPORTS



Customer service: Bottom line, not fluff

Corporate America is rapidly sensing the importance and value of customer service. Those two words are getting perhaps more play than any others these days at industry gatherings. Helping to confirm this is a recent compensation survey sponsored by the International Customer Service Association (ICSA), which found that the average salary for a customer service director jumped from $39,000 in 1986 to more than $53,000 last year.

"It reflects more of a commitment from the top executives of major corporations to the customer service area," says Bill Reinberger, ICSA public relations director. "They are realizing that customer service is a bottom line department, not a fluff department."

The study also revealed that 51 percent of the respondents in customer service report through sales and marketing, 14 percent answer to the administration side, and 13 percent fall under the distribution/logistics umbrella.

Manufacturers ranked customer service measures in the following order: Internal order cycle time (the time from receipt of a customer order until the order is shipped), orders shipped complete, total order cycle time (the time the customer order is received until the customer receives the order), value of goods shipped incorrectly and returned, transit time, case fill rate, value of goods damaged in transit, and dollar fill rate.

CF AIRFREIGHT

A Super prize from CF AirFreight

Joel Goldhar got to see the Redskins rout the Broncos in Super Bowl XXII courtesy of CF AirFreight. Goldhar, an employee of Burda Patterns in Smyrna, Ga., won CF's 1988 Super Bowl Grand Prize: Two tickets to the game, meals and hotel for two nights. This is the sixth year CF has sponsored the NFL Sweepstakes, which kicked off in DISTRIBUTION's August issue with a full color NFL Preview that included statistics, schedules and entry forms.

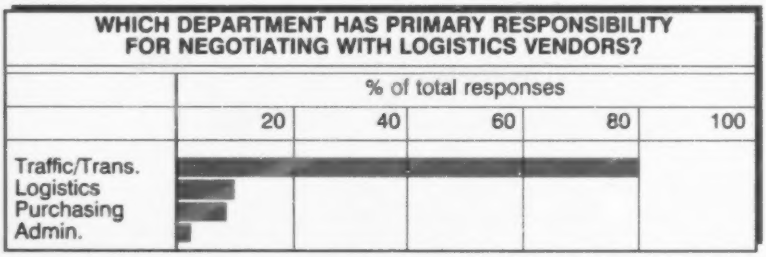
HOW SHIPPERS VIEW CARRIER NEGOTIATIONS

This reader survey reveals that upper management has given transportation managers the opportunity to take the lead in dealing with carriers. But shippers say they need more than just the boss's best wishes.

The importance of good negotiating skills in the logistics department is crucial to the effectiveness of a company's transportation network. The results of the "Dialogue" survey conducted in the November 1987 issue of DISTRIBUTION suggest that about 80 percent of transportation and traffic managers have the primary responsibility for negotiating with carriers for transportation services. Another 10 percent of the negotiations are handled by logistics managers (see charts 1 and 2.)

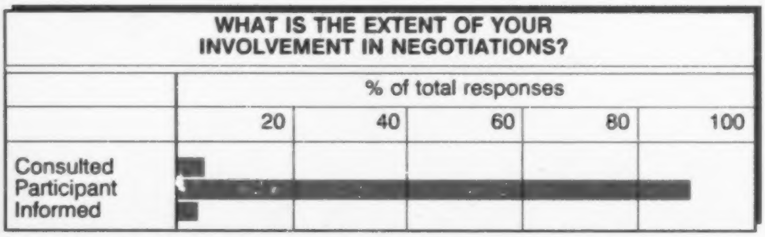
At the same time, the art of negotiation is a relatively new skill for most transportation professionals, and the industry as a whole is still testing the waters to find the best approach to dealing with carriers. This poll of shippers indicates that most are confident in their ability to negotiate for transportation services and have met with success (see chart 3). Less than 1 percent of the shippers responding to the survey felt that they were less skillful negotiators than the carrier representatives they met with.

chart 1



Transportation managers can't argue that they aren't being given the reins when it comes to carrier negotiations. Surprisingly, no respondents indicated that the legal department had primary responsibility for negotiations.

chart 2



Most transportation/distribution managers are active participants in carrier negotiations. A small percentage are still involved only in the role of consultants prior to the actual meetings with the carrier, and fewer yet are excluded entirely and merely informed of the results of the negotiations.

This rosy outlook points to a promising future if true, but shippers should be cautioned that they may not be the best judges of their own success. A study conducted in 1968 by Dr. Chester L. Karrass, of the Graduate School of Business Administration at the University of Southern California, indicated that in negotiations, winners and losers both express equal satisfaction. (See "Research Findings about Negotiations," February, p. 64.)

The nearly universal satisfaction of shippers over their handling of carriers fits in with these findings, and so may not be a true reflection of how well shippers are doing at the bargaining table.

Everyone's a Winner, Hopefully

The "winner" and "loser" labels may actually be inappropriate. On the surface at least, it appears as if the mood during negotiations is anything but hostile. Shippers have indicated a strong preference for a win/win approach to negotiating, and carriers have good reason to deal fairly with shippers as well (see chart 4). "The customer has the gold," advises one carrier account exec. "The key issue during negotiation is to solve his problem. Make him more profitable and he will be a customer forever."

continued

As Jana Busby, traffic manager for Media Valve Co., Inc. of Forth Worth, Texas, notes, shippers are living in a buyer's market, and therefore are likely to be able to wring concessions from their carriers. But dependence on transient market conditions is not the same as effective negotiating, and is likely to have negative repercussions when the market swings in the seller's favor.

Help From Above

Shippers stress that input from upper management is a better bargaining tool at the negotiating table. "We need to convince upper management that more details about the company's customers, suppliers, and future plans can lead to lower transportation costs and better service," says Ron Osborne, traffic manager at Fisher Mills, Inc.

This sentiment is echoed by the survey respondent who remarked that "Management at the top level has to realize that there is more to shipping than a telephone and a truck." Joseph Paul, warehousing manager for Rugged Wear, Ltd. in Wakefield, Ohio, adds "I need complete information on trends in the industry *before* they are told to me by my counterpart on the other side of the negotiating table."

The need shippers cite for more information from other departments within the company is just one element in the basics for effective negotiation listed by James Frazer, director of customer services for ECC America. The three requirements he identifies are: an understanding of the shipper's own real needs; an understanding of the carrier's needs; and an understanding of the customer's needs. The understanding and appreciation of the carrier's needs is a key concern Frazer shares with a majority of shippers.

A tactic often recommended by shippers cannot really be considered a part of the negotiating process, but is a useful precursor to a productive discussion. This tactic, used as a means of achieving the win/win strategy, is a reduction in the number of carriers being dealt with. By doing so, shippers can offer a more attractive amount of freight to the select carriers. With assurances of added volumes, carriers in turn can often offer bigger discounts and make service commitments that would under other circumstances be out of the question.

Something to Talk About

The content of the discussions between shippers and carriers, the survey indicates, rarely strays from the twin considerations of price and service (see chart 5). Liability accounts for a relatively minor part of the negotiating agenda, and such technical innovations as electronic data interchange, for the transmission of billing or payment information, rarely proves to be an important sticking point. However, this polarity could be somewhat overstated. EDI, reporting, and claims handling, while not singled out by shippers as primary concerns, are all aspects of the carrier's service capabilities, which shippers named as their number one negotiating topic. ■

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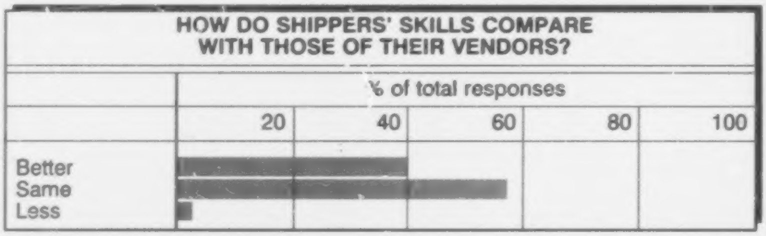
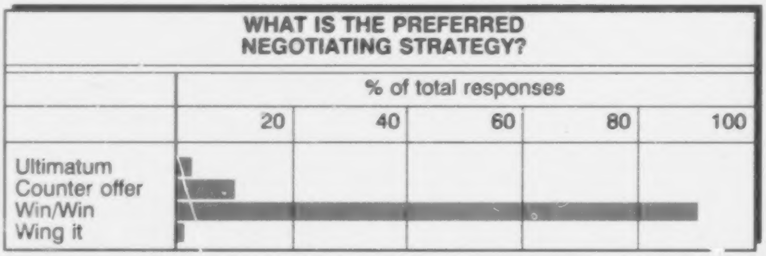
chart 3



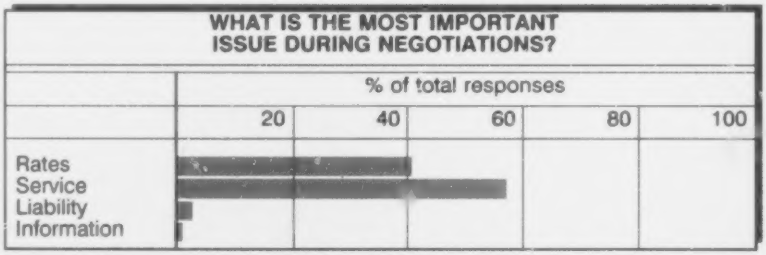
Shippers tend to view themselves as successful in dealing with their carriers. This success may be due to superior negotiating skills, but it could also reflect a market which currently favors the shipper.

chart 4



Nearly all shippers subscribe to the win/win approach to carrier negotiations. Also, they stress the need to enter negotiations armed with information.

chart 5



Nearly all the discussion occurring at the negotiating table is centered around rate and service levels. In practice, these two issues are not dealt with separately, but are closely tied together in price/service packages.

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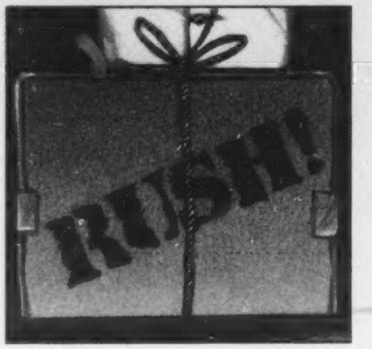

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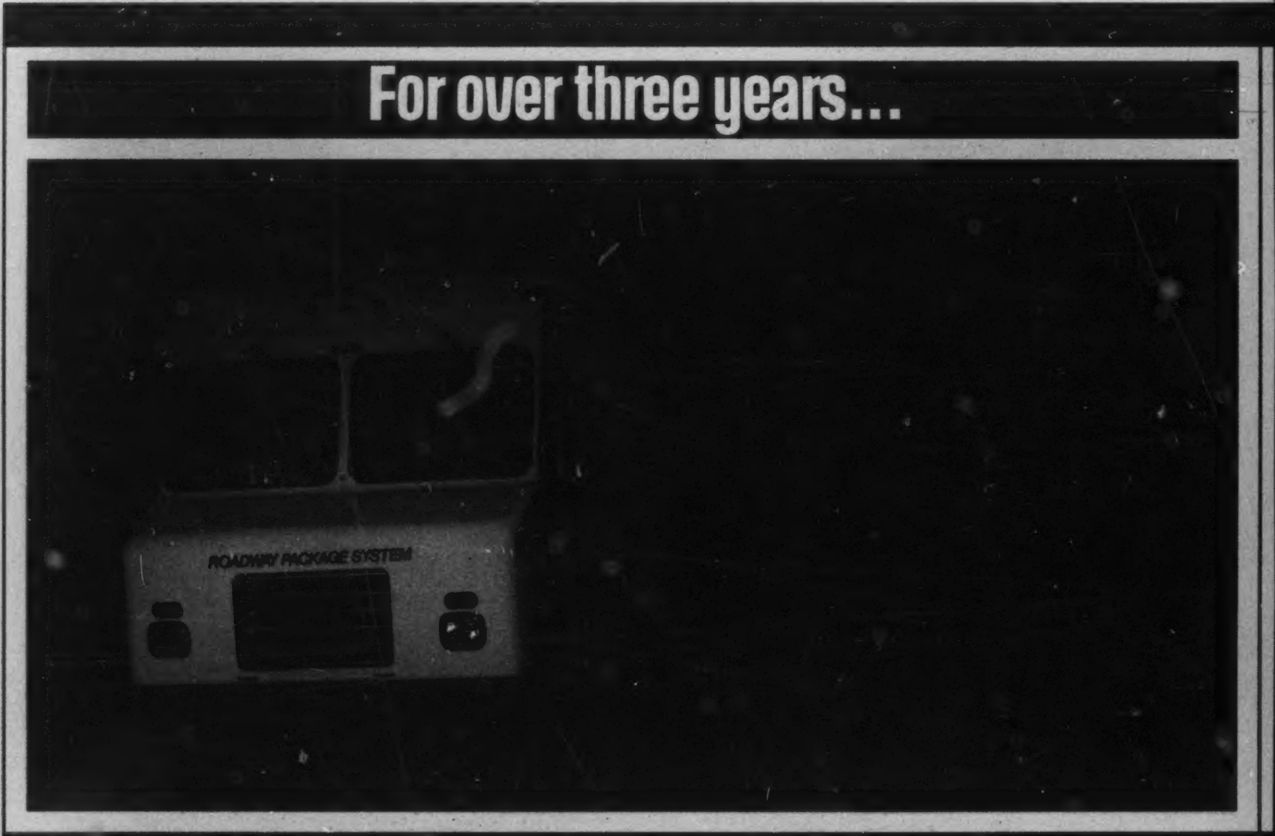
LOGISTICS CONTRACTS: FOR BETTER OR WORSE?

Shippers say this is the day of the contract, and that's just fine by them.

The answers shippers gave to the Dialogue questions posed in DISTRIBUTION's December 1987 issue are a conspicuous traffic sign pointing the way to the new route in shipper/carrier service. It is clear from what readers have said that contracting for transportation is becoming (and in fact for many respondents it has already) the preferred way of doing business with their distribution service partners.

As little as five years ago, transportation contracts were virtually unknown to more than half of the survey respondents, and none of them moved as much as half of their freight under a contractual agreement with a carrier. Today, the average respondent moves 55 percent of his shipments according to contract terms (see chart 1). A number of them have contracts governing 100 percent of their product moves, and many more have contracts to cover between 70 and 90 percent of their transportation volumes.

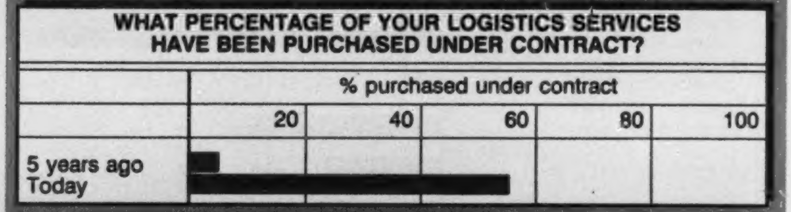
It's not hard to understand why these companies have embraced contracting to such a degree. Contracts are viewed as a means not only of assuring continued long-term quality service; they also are being



used to achieve a whole spectrum of other benefits (see chart 2 on page 12). Among these are the lower rates available to shippers who can commit to a minimum volume of freight, the guaranteed availability of equipment in sufficient quantities, and better integration of carrier and warehousing considerations into an overall logistics strategy. Of these, rate leverage was cited most often by respondents, but not to the exclusion of the others by any means.

Shippers also added such factors as customization of services, rate simplification, and reductions in the size and expense of private fleets as important reasons for arranging contracts with carriers. Shippers are attracted to contracts for a wide variety of reasons, according to Robert Markatos, senior logistics manager for CPC International. "Contracts are negotiated and used to establish future hedge positions, service levels, equipment needs, and total costs for sales and marketing needs," Markatos says. He adds that he doesn't commit all of his freight to contracts, but allows a certain amount to go uncontracted as a hedge for spot prices.

chart 1



The dependence on contracts as a means of securing distribution services has blossomed in the past half decade. Not only has the percentage of services purchased under contractual agreements grown from 5.5 percent to 55.1 percent, but the number of shippers relying on contracts also has increased substantially.

The Other Side of the Coin

There also are some problems that have arisen with the increased dependence on contracts within the respondents' companies (see chart 3 on page 13).

The most significant of these seems to be that the shippers who have negotiated contracts later find

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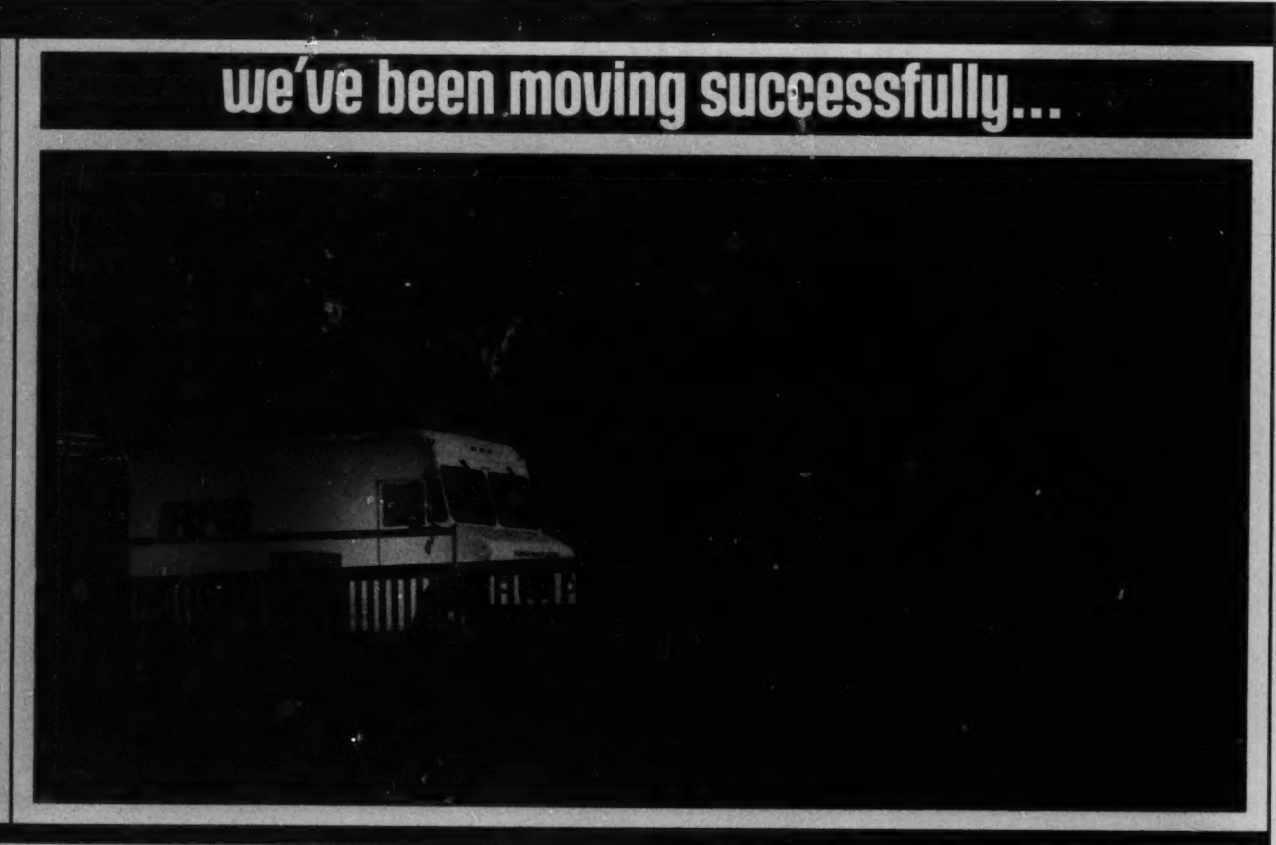
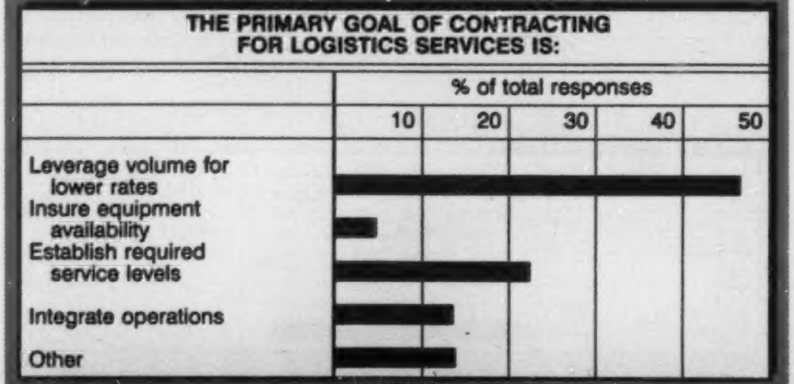


that the volumes promised to their carriers aren't being delivered. A plurality of 28 percent of the readers indicated that this was their major concern. Coupled with the fact that nearly half of the respondents also viewed rate leverage as the major benefit of transportation contracts, it would seem that too many shippers are promising carriers the world in order to get the best possible rate quote, without enough regard for the realities of their own operations.

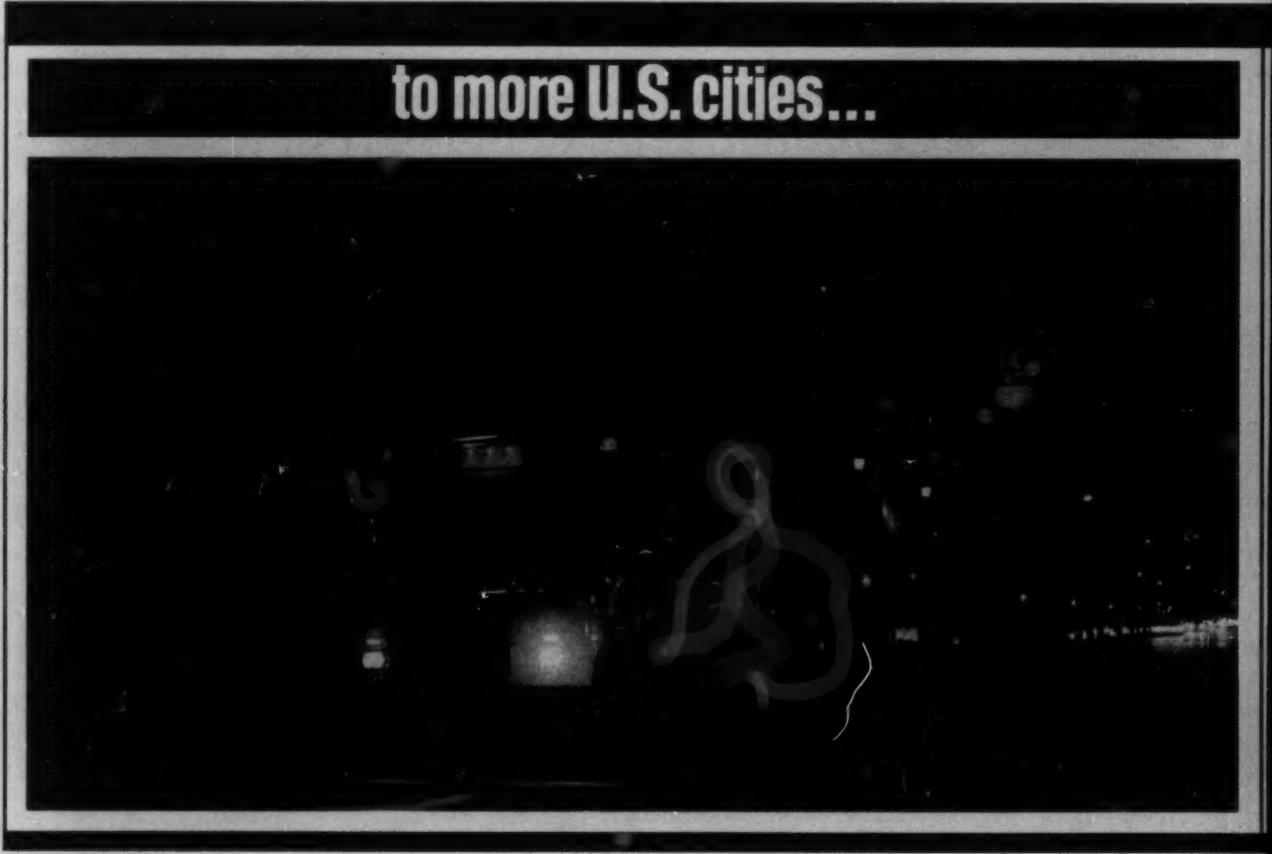
Interestingly, while over a quarter of those responding to the survey named their own inability to meet terms as the number one problem involved in contracting, only about one-sixth placed the burden of guilt on their carriers.

More encouraging is the fact that roughly half of all the problems the respondents are facing are of the sort that are easily ironed out over time as the two contracting parties grow accustomed to their relationship. While the survey did not directly address the question, it might be assumed that transportation contracts are like marriages in that they are usually successful if they can survive those first few tumultuous years.

chart 2

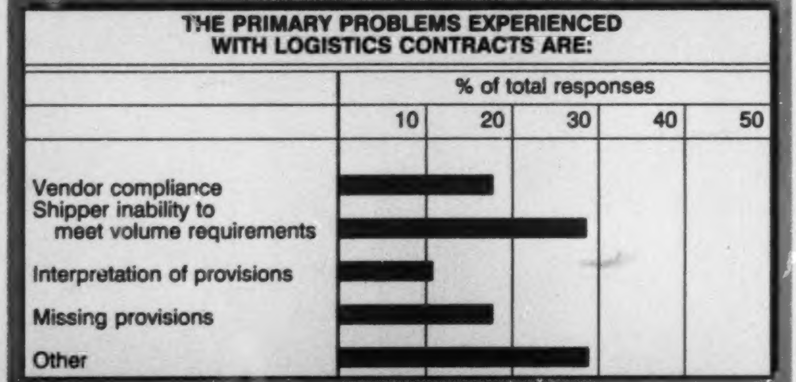


There are clearly a number of popular reasons for negotiating transportation contracts. Leveraging to gain lower rates is the most widespread goal, but establishing service levels and integrating transportation and warehousing also are important to shippers.



Among the problems that are generally more easily rectified are clauses or provisions which were overlooked by both parties, and the interpretation of the clauses which were included. These problems are usually nothing that some further negotiation can't resolve. But as one reader implies, contract renewal and renegotiation can become a problem of its own if both parties didn't negotiate in good faith the first time around.

chart 3



Shippers have had some difficulty getting vendors to comply with contract terms, but more often it is their own inability to meet obligations that causes problems. This chart also points up the need to establish clear contract terms up front.

Overall, the problems associated with contracts seem to be minimal when compared to the success indicated by the survey respondents. According to Ron Osborne, traffic manager with Fisher Mills, Inc., the very fact that contracts are offered attracts carriers and encourages better relations. "I interview and select carriers that appreciate our flexibility, dependability and 'carrier-friendly' attitude," says Osborne. "In theory, they will like our business so much that we can expect premium service from our carriers at their lowest price levels. So far it's working." ■

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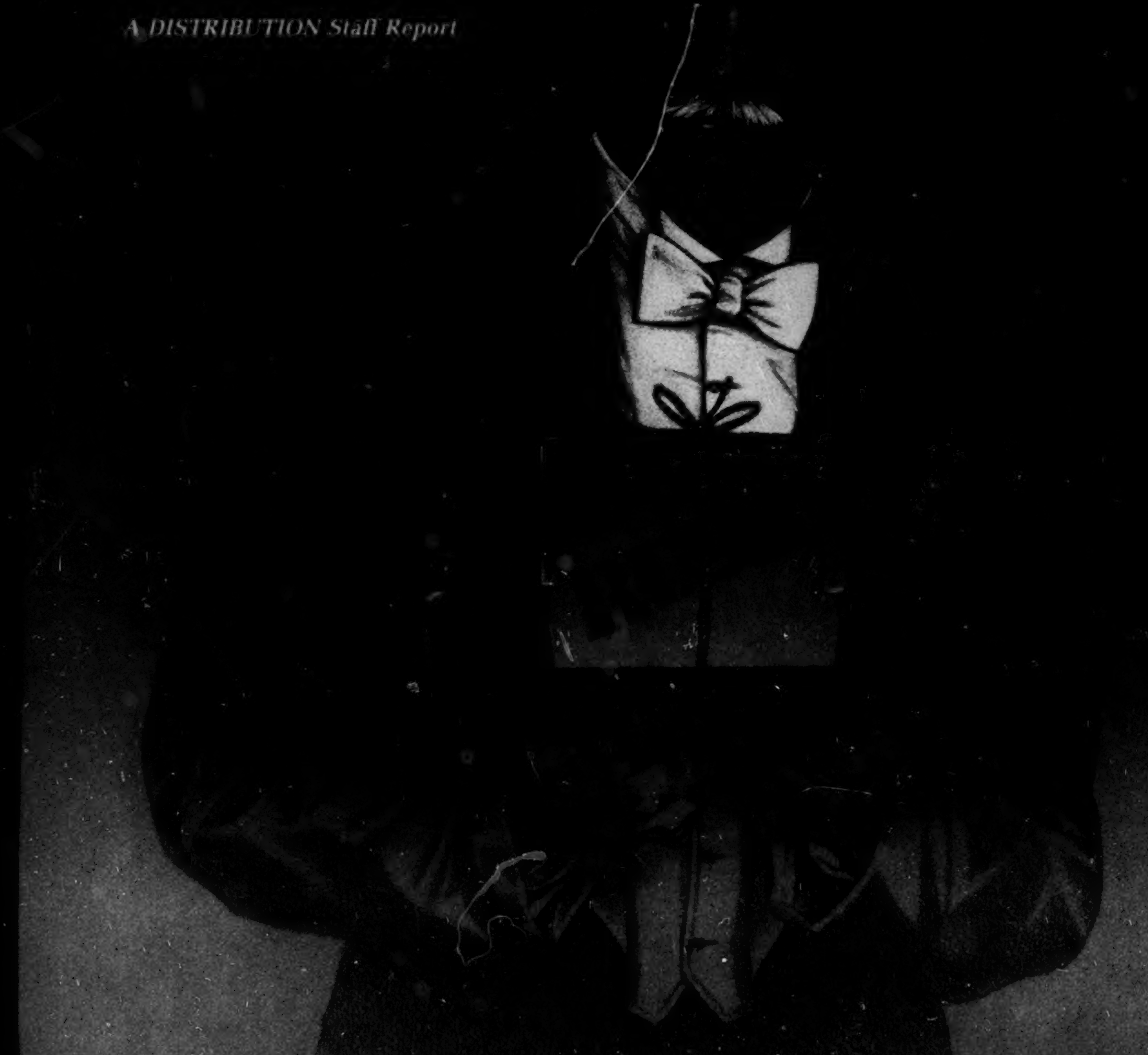
and our biggest move is still ahead...

CUSTOMER SERVICE:
HOW MUCH IS ENOUGH?

Too little means lost market share.
Too much means lost profit margins.
The upshot is, you want
to be good – but not too good.

A DISTRIBUTION Staff Report



It was almost 12 years ago that the Council of Logistics Management first studied the practice of customer service. It found that customer service was indeed an important part of the marketing mix for most firms; yet it also discovered that the vast majority of these companies were not able to translate customer service performance into a competitive advantage.

There were two reasons for this. First, firms didn't have a reliable means of measuring their customer service, and so didn't really know what service levels they were providing. Second, companies didn't know how to control the customer service process to ensure consistent performance.

As a result, many firms became customer service maniacs. They provided service levels they were sure would exceed the customer's expectations. They responded to fears of poor service by stocking more inventory at more locations. In short, they threw money at the problem.

Companies have since realized they can't afford to serve customers that way. Information has taken the place of inventory, and customer service has become an integral part of firms' strategic planning and competitiveness. It is now the preferred method of differentiating a product from that of a competitor.

A decade after its original study, CLM has researched the subject of customer service again. Three faculty members from the Ohio State University's College of Business—Dr. Bernard J. LaLonde, Dr. Martha C. Cooper and Dr. Thomas G. Noordewier—worked together on the most recent project. While customer service theory and practice continue to be defined and refined in all quarters of the logistics industry, the CLM's study represents the most significant research on the subject to date.

The study contains eight major conclusions about how customer service increasingly is driving not only distribution, but the entire marketing mission of the nation's leading companies. Lending credence to the study's conclusions is the fact that other leading consultants and major shippers have arrived at many of the same conclusions.

• **Customer service has moved from a descriptive/reactive activity of the 1970s to a proactive/management activity of the 1980s.** A good example of this is the way in which the definition of customer service has evolved. Most of the respondents to the 1976 study defined customer service in a narrow context, either as a specific function (order entry, for example) or as a performance standard. In 1987, study participants describe customer service more as a process, whereby value is added to the product and each party in the transaction comes out ahead.

Management has definitely changed the way it views this customer service process. According to logistics consultant Herbert W. Davis, management has long had the misconception that the only way to improve customer service was to spend lots of money on more warehouses, more safety stock and expedited transportation. "Nothing could be further from the truth," says Davis, who is president of Herbert W. Davis Co., Englewood Cliffs, N.J. "The key to good customer service is better control over the distribution system."

For example, fill rates are one of the most important measures of customer service. A company that has precise information about its inventory, good forecasts, well-planned stock location and an ability to coordinate orders with transportation and distribution will always have good fill rates. At the same time, such a well-run company will never have too much inventory or stock in the wrong warehouse because this same information will allow it to control its inventory and all the costs associated with it.

• **Customer service performance expectations are evolving into a window of acceptable performance rather than a specific point or hurdle.** Performance below minimum standards may result in punitive actions by the buyer, yet performance above the expected level *may not* result in increased market share.

Customer service levels vary within an acceptable range rather than at a specific point. In addition, these acceptable service levels will vary by industry. James C. Spira, president of Cleveland Consulting Associates, says that niche marketing is the way of the future; smaller lots aimed at specific customer groups. This, in turn, will demand niche distribution: faster turnarounds, less inventory, more and better communication between customer and vendor. In short, a higher level of service. "You can't have a mass distribution mentality and still have a competitive advantage," says Spira.

The Eastman Kodak Company is a good example of this. According to Alex Bezney, director of customer operations support, Kodak used to provide more or less generic customer service. "We did not differentiate between business units. We did not differentiate between big and small customers," he says. "We said, 'We're going to treat all customers alike.' Pretty soon it became apparent that you can't treat them alike."

As a result, service levels can vary widely from market to market, according to needs. "For example," says Bezney, "a photo finisher, if he runs out of paper, he has to send his people home. If a retailer runs out of film for amateur photographers, it's not as crucial. Of course we don't want him to run out of film, but it's not as crucial as sending people home."

Like many respondents in the first CLM study, Kodak used to grade its customer service almost solely on one performance standard: how fast it got an order out. "All of a sudden everyone's saying, 'Get it out as fast as possible," says Bezney. "That's all wrong. Some business units are interested in getting orders out as soon as possible. But there's a cost associated with that. Other business units say, 'We are eminently satisfied if you get the order out in three days.' If you put it in perspective, different markets have different needs. If they're happy when we get it out in three days, why knock ourselves out to get it out the same day?"

continued

The danger there is obvious. When you continually crank out orders the same day, Bezney adds, "the dealer may conclude that he doesn't have to carry any inventory. So it's a balancing act. You want to be good, but not that good. You don't want be continually expediting orders day after day."

• **Information has moved center stage in providing efficient and effective customer service.** Accurate and timely information has become the single most important ingredient in effective customer service. Almost 1 out of 10 orders requires some order status information before it is delivered. A third of the respondents to the CLM study provide this information in less than 10 minutes. The rest average 14 hours.

"The first thing companies have to do is develop information systems that have decision science technology," says Spira. These systems not only accept data, they massage it and make recommendations for action based on it. "They allow better and faster decisions," says Spira. "They evaluate tradeoffs much faster." For example, in some cases these systems can select the optimum carrier for a shipment almost simultaneously with the order entry process. The result of all this, Spira says, is that "customers perceive you to be more flexible, but you're actually making better decisions for both of you."

A major tenet of high level customer service, he notes, is that the expense of computerized "decision science" is offset by the ability to better develop the most low-cost, flexible response. "Ten years ago," Spira says, "the goal of an order-entry system was to process the order. Now the goal is to manage the service offering."

• **A significant amount of change in logistics systems is buyer-driven rather than seller-driven.** Pressure for customer service performance comes from the customer. Buyers are using new technology, such as EDI and bar coding, to track product and service performance in a real-time environment. Many firms are being forced into using EDI by their customers.

The power of information is helping Kodak do a better job of determining what the customer needs, as opposed to what *it* thinks the customer needs. For example, the

continued

Table 3.1

Elements of the Marketing Mix 1976 vs. 1987

ELEMENT	1976	1987	% CHANGE
Product	36	33	−14.9
Price	23	30	+30.4
Customer Service	23	23	NC
Advertising, Selling, Promotion	18	14	−22.2
Total	100	100	—

Table 3.2

Elements of the Marketing Mix 1987 vs. 1990

ELEMENT	TODAY	1990	% CHANGE
Product	33.3	32.7	− 1.8
Price	29.9	28.8	− 3.7
Customer Service	22.4	24.9	+11.2
Advertising, Selling, Promotion	14.4	13.6	− 5.5
Total	100.0	100.0	

The focus on price (Table 3.1) suggests that many U.S. companies are having trouble being competitive. In the near future, customer service considerations will rise significantly in importance (Table 3.2).

company now has a much more accurate knowledge of what its distribution and customer service costs are. "Now they see exactly what we're charging them for," says Bezney. "Before, it was part of the corporate picture. The distribution division was almost in a policing role." That created some uncomfortable moments for the distribution group. "We were at a disadvantage because the business unit would say, 'Why can't you supply that service? That is something we need,' " says Bezney. "We would say, 'Well, it costs a lot.' Well, what does it cost? 'We don't know.' That encouraged them to ask for the moon.

"Now when they come to us and say, 'We need this,' we're no longer in a reactive mode; we're not trying to talk them out of it. We say, 'Here's what it costs. Do you still want it?' Many times they say, 'Whoa, I don't think we do.' Now we tell them how many people it will take to provide a certain level of customer service, and they decide whether they think it's worth the investment."

The shift toward a more customer-driven service posture also is causing companies to examine the way their inventory is deployed. "If you proliferate your entire inventory to all your stocking locations, you spread yourself too thin," says Bezney. "If you consolidate inventory, or at least part of it, in one or two central locations, then you can improve your product availability."

Kodak currently has five regional distribution centers, in Los Angeles, Chicago, Rochester, N.Y., Dallas and Atlanta. They also have two central DCs, in Rochester and Windsor, Colo. The company carries most of its product line at all locations, but that may not be the case for long. Kodak is contemplating an A-B-C inventory deployment. Demand for A items is high and fairly constant. Demand for B and C items is highly variable.

"If you're going to stock some (B and C items) in LA, some in Chicago, some in Rochester, some in Dallas, and some in Atlanta, there is a high probability of having product in the wrong place, based on demand variability," Bezney says. "The customers are telling us that product availability is crucial. Our job is to improve product availability through logistical considerations, and the A-B-C concept is one of them."

- **Contractual-driven systems, rather than transactional-driven systems, are becoming the dominant mode in many logistics systems.** There is a strong movement toward contractual relationships in transportation and public warehousing. This trend is further strengthened by the growth of JIT and EDI. Also, customer service performance is becoming a focus of negotiation between buyer and seller. This can result in "tailored" customer service for an individual customer.

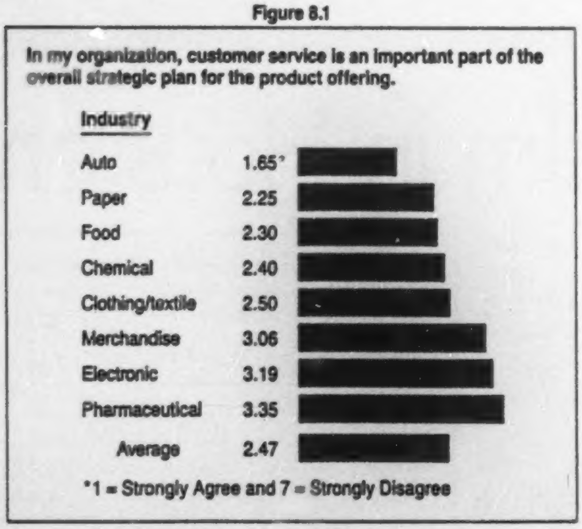
But it also can result in headaches. JIT and zero inventory techniques have dramatically altered the way companies do business. Orders are much smaller, but also much more frequent. The point here, according to Herb Davis, is that there is a greater chance the manufacturer will have a stock out when an order comes in. Or that there will be a transportation failure.

"Very simply," says Davis, "there is more opportunity for everything in the customer service cycle to go wrong. It is this vulnerability to customer service problems that makes the function of customer service so important today. It is the function of customer service to deal successfully with smaller and more frequent orders. For those companies used to doing things as they always have, the transition to a system based on customer service is quite painful."

Cleveland Consulting's James Spira and Kodak's Alex Bezney see the shift toward contractual relationships

continued

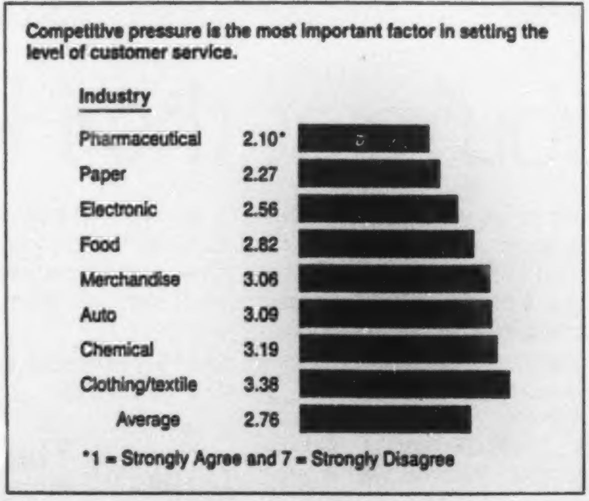
Figure 8.1



In my organization, customer service is an important part of the overall strategic plan for the product offering.

*1 = Strongly Agree and 7 = Strongly Disagree

Figure 8.2



Competitive pressure is the most important factor in setting the level of customer service.

*1 = Strongly Agree and 7 = Strongly Disagree

Companies have become comfortable using customer service as a strategic weapon instead of just an operational tool (Fig. 8.1). Also, customer service is seen as a key to differentiating products (Fig. 8.2).

gaining momentum in the company's dealings with both internal and external customers and suppliers. "We've seen several of our clients institute massive service analyses," says Spira. "Major clients also are looking at cross-unit synergies to affect more powerful relationships with customers."

Kodak has 17 distinct markets, and the company is divided into business units to serve those markets. Distribution is a shared resource within the company, and each business unit negotiates an annual service agreement with the distribution division.

- **There are significant differences in customer service practices and performance expectations by industry.** Different industries have different ways of measuring stock availability and other baseline measurements of customer service performance.

There also are different ways to segment your customer base: by geographic region, by product line, by volume, by distribution channel, by profitability. Which is the best way? "All of the above, depending on the industry and the nature of the business," says Spira. "There is not a generic solution."

Overriding the specifics, Spira maintains, is a company's overall service posture. There are three basic modes companies find themselves in—offense, defense, or maintenance. If your service posture is offense, you are actively working with customers to improve profits. If yours is a defensive posture, you are pushing product into the market and paying little attention to service complaints. If you are in a maintenance position, you are providing enough service to maintain market share.

Interestingly, Spira believes that most companies do not know what their posture is. "You can figure it out by doing primary market research," he notes, "but there are other ways to do it, both old-fashioned and contemporary." Testing on-time delivery and in-stock performance are the traditional ways of gauging service, but Spira contends that in the contemporary marketplace "you need to consider a whole range of variables in the ways buyers interact with sellers. You must consider the whole spectrum, and make sure every aspect of your business is consistent with the company's overall strategy."

- **The scope of customer service activity in many firms has extended from the domestic to the international sphere of operations.** As the likelihood of

continued

Table 3.3

1976 vs. 1987 Attitudinal Comparison[a]

	TOTAL MANUFACTURING		MERCHANDISING		TOTAL RESPONSE	
	1976	1987[b]	1976	1987[b]	1976	1987[b]
1. Customer service levels are improved as the number of field warehouses is increased.	– .70	– .10	– .10[c]	.04	– .55	– .09
2. Central order processing improves customer service levels.	.60	.94	1.20	.71	.75	.93
3. Independent middlemen (brokers, public warehousemen, wholesalers, etc.) tend to reduce customer service levels by delaying information from final customer.	.10	.37	.90	.71	.29	.39
4. Competitive pressure is the most important factor in setting the level of customer service.	– .20[c]	.84	– .40	.63	– .25[c]	.83
5. A centralized customer service function within the corporation tends to improve service levels provided to customers.	.70	.87	1.30[c]	1.13	.85	.88
6. The customer service function should report to the top sales/marketing executive.	– .60	– .02	–1.20	.54	– .75	.01
7. Most firms do not understand what levels of service their customers really want.	1.00	.59	.70	.46	.93	.59
8. Most firms do not specifically measure the cost implications of changes in customer service levels.	1.30	1.02	1.00	.54	1.23	.99
9. Most firms do not specifically measure the sales impacts of changes in customer service levels.	1.20	1.03	.80	.54	1.10	1.00
10. Customer service levels in most firms are set at a higher level than necessary to provide customer satisfaction.	.40	– .01	.40	– .21	.40	– .02
11. In my business, consistency in order cycle times is more important than having all products in stock.	.60	.28	.20[c]	.37	.41	.29

[a] Means of a 5 pt. scale where – 2 = strongly disagree and + 2 = strongly agree

[b] 1987 figures were converted from a 7 point scale where 1 = strongly agree and 7 = strongly disagree by using the formula ([4 – X]/1.5)

[c] Bimodal

Table 3.3 (scale: -2=strongly disagree and 2=strongly agree) shows how customer service attitudes have changed. Overall, managers are more sensitive to the cost and sales implications of customer service.

international partners in a global supply chain increases, the customer service expectations of both buyer and seller become more complex in scope and execution. The CLM project included several case studies, one of which concerned an international customer service problem experienced by Digital Equipment Corporation.

Both Digital's international manufacturing and foreign sales subsidiaries are served by various domestic facilities. The decentralized shipment of goods overseas caused customer service to suffer. Efforts often were duplicated, and errors in documentation increased. Because of stringent export controls on high-tech equipment, these problems threatened to handicap Digital's ability to do business overseas. In addition, many of Digital's facilities were moving toward JIT, so that shorter and more predictable order cycle times were necessary.

Digital responded by establishing the International Logistics Center in 1986. The ILC consolidates and packs all international orders, ensures proper documentation and arranges for transportation. This distribution center has given the company far greater control of its international logistics. Delivery times have been shortened and documentation errors have been reduced. The number of incorrect shipments has been reduced to almost nil (accuracy is 99 percent), resulting in fewer delays because of foreign customs clearance. The bottom line is that the ILC paid for itself in one year.

• **The pressure on customer service performance will continue to increase over the visible horizon.** The survey findings indicate strong pressure from customers, competitors and new technology to maintain higher customer service standards. The expectation of the customer is higher, and the customer's capability of monitoring performance on a real-time basis is steadily increasing.

"Logistics in the 1990s is going to be in an environment where the importance of the product brand you're offering will diminish," says Spira, "and the total package, the relationship between vendor and customer, will become more important. Service will play an ever greater role in the marketing mix." ■

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GUIDELINES FOR IMPLEMENTING CUSTOMER SERVICE STRATEGIES

Based on the findings of its study, the Council of Logistics Management offers the following guidelines for implementing a successful customer service strategy.

1. Recognize customer service as a "boundary-spanning" process, both in function and geography. The objectives of a customer service program cannot be achieved within the logistics function alone, regardless of how broadly it is defined. An effective customer service program will integrate diverse functions which have important roles in satisfying the customer.

2. Customer service performance metrics should be buyer-focused, not seller-focused. Seller-focused standards insulate management from customer needs and delay response time to shifts in customer requirements.

3. Search for an acceptable range of service rather than a required point in the design of customer service systems. This establishes a "window" of service that is generally acceptable to the customer, allowing the seller to set up a more flexible logistics system, usually with lower costs and no penalty in terms of market share or customer goodwill.

4. Design information support systems which are preemptive and visible to internal and external partners. Information systems should be designed to answer customer service questions before they are asked. They also should provide visible and timely information not only to customers, but to all internal functions which require customer information for the successful completion of their objectives.

5. Learn how to negotiate in a win-win environment. The shift from transaction-based to contract-based relationships requires skills in negotiation and in structuring win-win contexts.

6. Develop and market a corporate-wide metric which provides accurate and timely monitoring of key result areas in customer service. Create boundary-spanning standards which are acceptable to all internal and external components that monitor key result areas in customer service. All functions, as well as top management, must accept and use the same set of customer-driven standards.

7. Develop an ongoing process for scanning customer service input from the external environment. Customer service is affected by the competitive environment and other external inputs. To insure the relevance of the customer service program to the targeted customer mix, a method for continuously monitoring the elements of the external environment must be developed, tested and made standard practice.

8. Link the corporate planning process to customer service performance expectations. In a period of rapidly changing technology, the customer service program must be especially sensitive to the overall goals of the corporation. Strategic deployment of corporate resources and decisions on inventory deployment, modal choice, EDI, etc. are necessarily linked. This link will become even more critical as the pace of customer-influenced technology and the range of logistics system options increase.

The framework and charts used here are part of "Customer Service: A Management Perspective," which features the results of the CLM study and is available to CLM members for $30 ($60 for nonmembers). For an order form, contact CLM at (312) 574-0985.

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VOL. 87, NO. 6

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30 SHIPPERS & CARRIERS PULLING TOGETHER

Management of the supply channel is the essence of logistics. It is where we add value to our companies' products. However, the gap between the risks of inferior performance and the rewards of superior performance is growing wider. That means we must completely reassess our relationships with carriers.

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In a volatile business, a company must do whatever it takes to maintain market share. For Seagate Technology it means improving customer service by controlling inbound and outbound traffic.

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Tricks, gimmicks and ploys are not the stuff long-term relationships are made of in transportation negotiations.

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The "Lite" craze comes to logistics software in the form of this new "low calorie" rating package.

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LOGISTICS TRENDS

Has overnight delivery seen its day?

A survey conducted by the Colography Group, a research and consulting firm specializing in expedited transportation services, shows that overnight service is no longer the preferred method of shipping express air cargo. Services aimed at two to four-day delivery schedules represented over 60 percent of the market by volume during the year ending July 1987, the firm reports. A significant portion of that total is being moved over the road by "expedited LTL" service in the three to four-day range.

DOMESTIC MARKET DEMAND BY TRANSIT TIME

transit time categories	pounds in millions	percent demand
overnight	2,881	39.5
2–3 days	3,591	49.3
3–4 days	815	11.2
Total	7,287	100.0

Schedule your pick-ups with mileages in mind, carrier says

Pick-up schedules that fail to take distances into account are responsible for unnecessary delays and contribute to driver dissatisfaction, according to Schneider National Carriers. Pick-up schedules which make it impossible for a driver to reach his destination before the end of the consignee's unloading shift take money from the driver's pocket by making him sit idle until the following morning. "For example," the carrier notes, "a 650-mile load picked up at 3 p.m. cannot usually be delivered until 5 p.m. the next day. Many consignees stop unloading at 2 p.m.; therefore the delivery is made the following morning at 7 a.m.. Scheduling the pick-up of the load in the morning would prevent this delay." A table of optimum pick-up times listed by mileage (at right) along with the percentage of loads actually falling within the recommended window, shows how seldom distances are figured into shippers' pick-up schedules.

PICK-UP SCHEDULING EFFICIENCY

MILEAGE	OPTIMAL PICK-UP WINDOW	PERCENT OF LOADS CURRENTLY OPTIMAL
100-200	10pm-4am	11%
300-400	10am-1pm	23%
500-600	7am-9am	32%
700-800	3pm-6pm	19%
900-1000	10am-2pm	21%
1100-1400	7pm-10pm	22%
1500-1600	7am-10am	26%
1700-1800	11pm-3am	13%
1900-2200	7am-10am	29%

First microchips, now forklifts

Following up on a complaint lodged by Hyster Co. and a number of U.S. trade unions, the Commerce Department has determined that several leading Japanese forklift manufacturers are dumping trucks on the U.S. market at unfairly low prices. Based on current Japanese production costs and market values, the Commerce Department cites import prices as much as 56.8 percent below the fair market value. The results of an investigation by the International Trade Commission will determine whether anti-dumping import duties should be levied against the Japanese imports, but until a decision is reached, American buyers will be required to post bonds in the amount of the possible future penalty.

One Japanese manufacturer, Nissan Motor Co., has decided to resolve the dilemma by making its lift trucks here. Nissan says the decision was made largely to combat higher costs due to the strength of the yen. But it also acknowledges that other motives are involved. The decision "will work to ease trade friction with the U.S. At the same time, this move will serve as one approach to deal with the issue of dumping," the company said. Nissan's forklifts will be made in the U.S. under an agreement with Barrett Industrial Trucks, Inc. a non-competing U.S. lift truck manufacturer.

Throwing technology into the trade balance arena

The exporting of high technology computer equipment has often been viewed as a potential, if strategically risky, means of moderating the U.S. trade deficit. Figures just released by the Computer and Business Equipment Manufacturers Association show that the balance of trade in computers and related equipment is indeed favorable to the U.S., but not dramatically so. Export sales of computer equipment amounted to $18.6 billion in 1987, while $14.5 billion was paid for imports. Despite the favorable overall balance, however, the high-tech market contributed substantially to the imbalance of trade between the U.S. and Japan in 1987.

Making a case on the access issue

The Private Truck Council of America is gathering evidence in order to make a case for increased access for 48' X 102" trailers. PTCA General Coun-

continued

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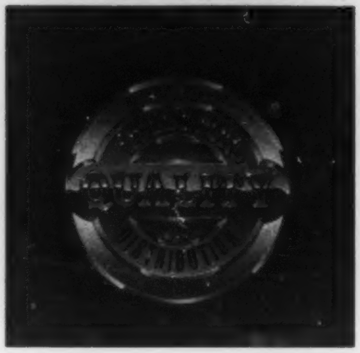
28 QUEST FOR QUALITY

More and more shippers have realized that their competitiveness in the marketplace depends on the performance of the carriers they use. Most transportation managers today are choosing their carriers on the basis of strict quality measurements. DISTRIBUTION's Quest For Quality program is designed to encourage such measurements by shippers.



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Last year truckers found holes in their pockets. And while the railroads enjoyed higher volumes and revenues, profit margins headed down the wrong track.

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Here is the most high profile example of a shared logistics system yet seen in American business.

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But there's a lot more than just a fancy brochure to Appleton Paper's carrier certification regimen.

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In bulk shipping, Quality has to be much more than snappy slogans. Here are the stories of several shippers and carriers that are riding the wave.

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Benchmarking—comparing your performance to a baseline—is a good way to gauge progress. Here's how to go about it.

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QUEST FOR
QUALITY
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The nation's shippers pick their quality carriers – those who set the standard for excellence in transportation service.

DISTRIBUTION's 1988 QUALITY CARRIERS

REGIONAL LTL CARRIERS
Arkansas Freightways
Averitt Express
Con-Way Southern Express
Con-Way Western Express
NW Transport Service
Preston Trucking
Southeastern Freight Lines
TNT Bestway
TNT Holland
Transus
Willig Truck Lines

NATIONAL/INTER-REGIONAL LTL CARRIERS
ABF Freight System
Carolina Freight Carriers
Consolidated Freightways
Roadway Express
Watkins Motor Lines
Yellow Freight System

VAN LINES
Allied Van Lines
Atlas Van Lines
Bekins Van Lines
Mayflower Transit
United Van Lines

TRUCKLOAD CARRIERS
Carretta Trucking

WATER CARRIERS
ACT/Pace Line
Canada Maritime
Columbus Line
Dart Containerline
Hapag Lloyd
Maersk Line
OOCL
Trailer Marine Transport
Trans Freight Lines

RAIL CARRIERS
Burlington Northern
Grand Trunk Western
Missouri-Kansas-Texas
Union Pacific

RAIL THIRD PARTIES
American President
  Distribution Services
Greater South Traffic
The Hub Group

RAILCAR BUILDERS & LESSORS
Union Tank Car

STACK TRAIN SERVICES
American President Intermodal

AIR CARGO FORWARDERS
MSAS Cargo International
Northern Air Freight
Pilot Air Freight

We're looking for total performance in our carriers," says Robert Stoner, corporate traffic and fleet manager for Rite Aid Corp. "That means every aspect of service has to be performed well. We assign carriers very specific delivery times. If the carrier misses an appointment by more than an hour, that's one strike against him. If we have ongoing claims problems, that's two strikes. If the carrier rep fails to keep us adequately informed, that's three strikes. Just like in baseball, with three strikes, you're out."

That's the way business is done today in the big leagues of transportation management according to the nearly 1,400 shippers who took part in the 1988 Quest For Quality program. Shippers demand high performance in all aspects of their dealings with carriers. It's no longer just a game of finding the lowest prices for minimally acceptable service.

The survey is DISTRIBUTION's fifth annual report of how shippers rate the individual carriers and vendors of transportation services they use according to four key measurements of transportation quality: service, convenience, price and sales effectiveness. The scores on the following pages are based on shipper ratings ranging from 0 (unacceptable) to 5 (outstanding). A complete explanation of the survey's methodology appears on p. 46.

In the five years that DISTRIBUTION has been conducting this survey, more and more shippers have realized that their competitiveness in the marketplace depends on the performance of the carriers they use. Because the carrier selection process is so important to shippers today, most transportation managers are choosing their carriers on the basis of strict quality measurements. DISTRIBUTION's Quest For Quality program is designed to encourage such measurements by shippers. In addition, Quest For Quality recognizes those transportation companies that have:

•Identified shippers' needs and developed truly innovative services to meet these needs;

•Performed these services reliably and consistently with essential follow-up;

•Trimmed operating costs to be able to offer the services at reasonable, affordable prices;

•Made doing business with the carrier easy and convenient;

•Sold its services after learning about the shipper's business;

•Kept customers informed about the transportation company's capabilities.

Our Quest For Quality program is also designed to educate the shipper. Transportation managers who appreciate total quality in their carriers make better buying decisions. They also better understand the importance, to themselves and the industry, of dealing fairly and professionally with carriers.

Shippers who don't grasp this are doing serious, and perhaps permanent, damage to the industry, Stoner adds. "You can hound these guys to death on rates, but eventually the service is going to suffer," he says. "When service suffers, what do you have? You don't have a carrier. And then you're going to be stuck with somebody you didn't want to deal with in the first place."

MOTOR CARRIERS

NATIONAL/INTER-REGIONAL CARRIERS	SERVICE	CONV.	PRICE	SALES
AVERAGE*	**3.22**	**3.22**	**3.29**	**2.86**
ABF	**3.41**	**3.36**	**3.35**	**3.16**
ANR	2.87	2.97	3.25	2.70
American Frt. Sys.	2.99	3.11	3.27	2.94
Brown Transport	2.76	2.93	3.27	2.52
Carolina Frt. Carriers	**3.41**	**3.38**	**3.37**	**3.01**
Consolidated Frtways	**3.40**	**3.52**	**3.44**	**3.26**
Lifschultz Fast Freight	2.84	2.61	2.97	2.34
Overnite Trans.	**3.48**	**3.33**	**3.47**	2.90
P.I.E. Nationwide	2.95	3.05	3.02	2.63
Pilot Freight Carriers	3.14	3.19	**3.29**	2.67
Roadway	**3.41**	**3.51**	**3.29**	**3.08**
Roberts Express	**4.48**	**4.03**	2.54	2.86
Transcon	2.91	2.93	3.04	2.81
Watkins Motor Lines	**4.05**	**3.73**	**3.62**	**3.59**
Yellow Freight	**3.66**	**3.72**	**3.42**	**3.38**

VAN LINE SERVICE CARRIERS	SERVICE	CONV.	PRICE	SALES
AVERAGE	**3.40**	**3.56**	**3.42**	**3.12**
Allied Van Lines	**3.49**	**3.67**	**3.64**	**3.13**
Atlas Van Lines	**3.71**	**3.93**	**3.43**	**3.54**
Bekins Van Lines	**3.44**	**3.59**	**3.43**	**3.15**
Mayflower	**3.40**	**3.59**	**3.56**	**3.27**
North American Van Lines	3.29	3.31	3.15	2.98
United Van Lines	**3.88**	**3.92**	**3.65**	**3.67**

TRUCKLOAD CARRIERS	SERVICE	CONV.	PRICE	SALES
AVERAGE	**3.57**	**3.27**	**3.29**	**2.74**
Builders Transport	**3.83**	**3.38**	**3.45**	2.66
Carretta Trucking	**4.23**	**3.59**	**3.32**	**3.36**
CRST	3.18	2.98	3.20	2.45
Dart Transit	3.54	**3.30**	3.22	2.76
Frederick Transport	**3.63**	**3.56**	**3.71**	2.82
Inway	3.25	3.00	3.09	2.73
J.B. Hunt	3.49	**3.32**	**3.58**	2.61
National Freight	2.60	2.40	2.72	2.16
Ranger Transportation	3.56	**3.29**	3.19	2.71
Ryder Freight System	2.93	2.85	2.80	1.93
Schneider Transport	3.27	3.07	3.04	2.35

** Averages calculated on basis of data for all carriers in category, not just those listed.*

MOTOR CARRIERS

Large LTL carriers saw their profits drop last year. Shippers think the carriers' service, convenience and sales effectiveness also took a dip; but higher scores for pricing indicate shippers still command hefty discounts from carriers hungry for freight.

Poor communications with carriers remains shippers' greatest complaint. Richard Stamper, general supervisor, materials control for Easco Hand Tools in Springdale, Ark. is put off by carrier reps that don't call, especially those that know his business because their line is used by vendors to drop off inbound freight. "They know we're here," he says. "Their trucks are coming in all the time, but the sales people just don't call."

Some large shippers are pleased with the growing popularity of national account sales efforts. For example, Texas Instruments' Edward L. Schulze, manager-materials services, says "If there's some problem, we'll go straight to a divisional level."

Other shippers don't see that as a bonus. Rite Aid's Robert Stoner says he balks when carriers try to assign national account reps to his business. Instead, he puts the carrier's local person in charge of fixing problems that crop up in that carrier's system, no matter where they happen. When you want national account people, "they're always 20 states away," says Stoner. "If you leave a message you might hear from them in three or four days."

Van lines enjoyed the highest overall ratings in all categories, while truckload carriers received higher scores than ever for service and convenience, but lower scores for pricing and sales. "Truckload reps rarely are interested in our real shipping needs," says Al Giunchi, corporate traffic manager of Hartz Mountain. "They're just brokering freight. We would like carrier reps to see our relationship as a two-way street."

MOTOR CARRIERS

BULK CARRIERS

	SERVICE	CONV.	PRICE	SALES
AVERAGE*	**3.58**	**3.54**	**3.18**	**2.91**
Chemical Leaman	**3.79**	**3.54**	2.93	2.61
DSI Tank Lines	3.42	3.08	**3.50**	**3.50**
Matlack	3.53	3.03	3.10	2.63

REGIONAL CARRIERS

	SERVICE	CONV.	PRICE	SALES
AVERAGE*	**3.51**	**3.27**	**3.18**	**2.92**
AAA Cooper	**3.60**	3.15	2.87	2.62
AAA Trucking	3.06	2.96	2.79	2.67
APA Transport	3.36	3.04	2.78	2.81
Advance Transportation	**3.52**	**3.38**	**3.25**	2.93
Arkansas Freightways	**3.97**	**3.38**	**3.40**	**3.07**
Averitt Express	**4.16**	**3.79**	**3.41**	**3.70**
Central Freight Lines	3.25	2.99	2.26	2.13
Central Transport	3.08	2.95	3.08	2.84
Churchill Truck Lines	3.39	3.18	2.89	2.97
Con-Way Central Express	**3.99**	**3.52**	3.05	**3.19**
Con-Way Eastern Express	3.18	3.21	3.17	2.77
Con-Way Southern Express	**3.80**	**3.40**	**3.40**	**3.25**
Con-Way Western Express	**3.71**	**3.52**	**3.52**	**3.15**
Estes Express	3.31	2.94	2.89	2.60
Fore Way Express	3.46	**3.31**	**3.55**	2.80
GI Trucking	3.30	3.17	3.02	2.17
Gross Common Carrier	3.47	3.19	**3.50**	**3.14**
Holmes Transportation	3.38	3.22	**3.28**	2.85
Jones Truck Lines	**3.53**	3.23	**3.37**	**3.22**
Kingsway	3.29	3.06	2.97	2.61
Merchants Fast Freight	3.30	2.95	2.73	2.53
Mistletoe Express	2.67	2.60	3.09	2.13
New Penn Motor Express	**3.62**	**3.37**	2.73	2.97
NW Transport Service	**4.22**	**3.74**	**3.60**	**3.80**
Old Dominion Freight	2.84	2.80	3.13	2.55
Preston Trucking	**3.57**	**3.53**	**3.30**	**3.20**
Red Arrow Freight Lines	3.00	2.96	2.61	2.52
St. Johnsbury	3.35	3.19	2.95	2.64
Southeastern Frt. Lines	**4.07**	**3.67**	**3.30**	**3.41**
Spartan Express	3.38	3.02	**3.31**	2.98
Stoops Express	**3.52**	3.15	**3.38**	2.73
TNT Bestway	**3.72**	**3.66**	**3.79**	**3.28**
TNT Holland	**4.03**	**3.61**	**3.36**	**3.38**
TNT Overland Express	3.11	3.20	**3.20**	**3.04**
TNT Red Star	3.50	**3.57**	3.15	**3.11**
Transus	**3.54**	**3.51**	**3.49**	**3.47**
Viking Freight	3.46	3.21	2.96	2.64
Willig Truck Lines	**3.79**	**3.56**	**3.42**	**3.27**

** Averages calculated on basis of data for all carriers in category, not just those listed.*

MOTOR CARRIERS

Bulk carriers received the highest service scores of any motor carriers. Service is almost everything for bulk shippers says Gary Baumgartner, traffic manager for Washington Public Power Supply in Richland, Wash. The company loses as much as $750,000 a day if his plant shuts down.

"Our bulk carriers literally go the extra mile for us," says Baumgartner. "We're in the middle of nowhere. One carrier has saved our butt several times because they're the only one in the Pacific Northwest with rubber lined tank cars, which we need for sodium hydrochloride. The tankers are extremely expensive, so you have to keep them moving. Yet the carrier always manages to squeeze us in."

Regional LTL carriers earned higher scores than the national carriers. Julia Cathey, office manager at Douglas Equipment Co. in Birmingham, Ala., heaps praise on a regional carrier shipping to her company's major service area no later than second day. "They will call me if a I forget to call them on a busy day," she says. "Sometimes a driver might just stop by to see if I need anything. Once I was swamped with freight bills on a busy day and their driver helped me write them."

Al Giunchi, corporate traffic manager for Hartz Mountain Corp., Harrison, N.J., prizes one attribute above all others: "They tell us the bad news first, before the customer finds out," he says. "That way we deal directly with the customer when something is wrong. Hartz doesn't work under the 'No news is good news' theory."

If shippers' perceptions of motor carrier service dimmed this year, their view of carrier sales efforts blacked out. Shippers are nearly unanimous in their panning of carrier sales reps. Many shippers complain that they never see a sales rep; others say the ones they do see are woefully unfit for the job.

WATER CARRIERS

STEAMSHIP LINES	SERVICE	CONV.	PRICE	SALES
AVERAGE*	**3.36**	**3.25**	**3.17**	**2.84**
ACT/Pace Line	**3.55**	**3.55**	**3.45**	**3.45**
AMTRANS	3.00	2.67	2.94	2.72
American Pres. Lines	**4.00**	**3.91**	2.84	**3.27**
Atlantic Container Line	**3.85**	**3.81**	3.08	**3.27**
Atlanticargo	3.23	3.15	**3.46**	2.77
Barber Blue Sea	3.21	3.13	2.93	2.80
CCT	**3.54**	**3.38**	2.85	2.23
Canada Maritime	**3.94**	**3.53**	**3.71**	**3.06**
Cast North America	3.11	3.11	**3.78**	**3.00**
CGM	3.09	3.00	2.73	2.27
Chilean Line	2.82	2.67	2.59	2.22
Columbus Line	**3.93**	**3.85**	**3.30**	**3.41**
Dart Containerline	**3.42**	**3.37**	**3.35**	**3.08**
EAC Lines	2.90	2.80	**3.90**	2.73
Evergreen	3.15	3.13	**3.45**	2.67
Farrell Lines	2.52	2.64	2.85	2.67
Hanjin Container Lines	2.81	2.94	3.12	2.41
Hapag Lloyd	**4.06**	**3.71**	**3.21**	**3.29**
Hoegh Lines	2.93	2.73	**3.21**	**2.21**
Hong Kong Islands Line	3.00	3.09	**3.73**	2.50
Italian Line	2.85	2.43	**3.31**	2.86
Ivaran Line	3.24	2.94	2.59	2.24
Japan Line	2.57	2.53	2.57	1.87
Jugolinija	3.00	2.82	**3.82**	2.30
K Line	**3.50**	**3.33**	**3.25**	2.67
Korea Shipping	2.82	3.00	3.09	2.17
Lykes Lines	3.33	3.24	**3.57**	**3.25**
Maersk Line	**4.11**	**4.11**	**3.42**	**3.11**
Matson Navigation	**3.63**	**3.63**	3.00	**3.13**
Mitsui O.S.K.	2.88	3.06	3.12	2.83
NYK Line	3.25	2.94	3.06	2.76
Nat'l Shipping Co., S.A.	3.00	2.70	2.60	2.30
Navieras de Puerto Rico	**3.71**	**3.28**	3.12	2.94
Nedlloyd Lines	3.25	3.21	3.08	**3.08**
Neptune Orient Lines	3.24	3.11	2.38	2.59
Netumar Line	2.80	2.70	2.50	2.30
OOCL	**3.58**	**3.42**	**3.22**	**3.08**
Polish Ocean Lines	**3.47**	**3.32**	**3.79**	2.90
Sea-Land Service	**3.47**	**3.45**	3.11	2.79
TMT	**3.89**	**3.61**	**3.22**	**3.61**
Trans Freight Lines	**3.71**	**3.61**	**3.29**	**3.42**
Waterman Steamship	3.21	3.21	3.07	2.93
Westwood Shipping	3.22	3.22	**4.00**	**3.00**
Y.S. Line	3.20	2.90	**3.22**	2.80
Zim Container Service	**3.43**	**3.27**	**3.41**	2.87

** Averages calculated on basis of data for all carriers in category, not just those listed.*

WATER CARRIERS

Steamship lines saw a drop in all performance areas from last year, when they enjoyed the highest overall scores among all carriers. The greatest drop was in the sales category. "When it comes to customer relations, I don't have any," says Ed Beames, distribution unit manager for Pillsbury's Green Giant division in Watsonville, Calif. "With few exceptions I haven't seen a sales rep in months. Considering we ship about one million pounds per day, I find this neglect hard to understand."

Regular face-to-face meetings with carrier reps is important, says Beames. "I want carriers to come here and see our operation. I have special equipment needs," he says, "and I want to make sure the carrier understands these needs. We also have strict container weight limits on the highways, and I'm concerned about our compliance. Only one carrier I have talked to even seemed to care about my concerns. The responsiveness of ocean carrier sales reps is sadly lacking."

Carriers with inland door-to-door capabilities received the highest service scores. "Just about every carrier can get from port to port on time," says Ed Murray, import manager for Allied Chicago in Wheeling, Ill. "I want to use carriers who I can depend on to deliver to my door without my having to deal with customs clerks, railroads and truckers."

In the convenience category, carriers with EDI capabilities rated highly. "On-line information systems with our ocean carriers is important to our company," says Murray. "I'm tied into Customs with a couple of our carriers, and that lets me know the instant a container is cleared and ready for pickup. When we use carriers without this capability, a container can be cleared for days before we know it. There is no doubt which carrier I will use if I have a choice."

AIR CARRIERS

CONVENTIONAL FORWARDERS	SERVICE	CONV.	PRICE	SALES
AVERAGE*	***3.12***	***3.08***	***3.05***	***2.70***
Air Express Int'l	***3.19***	***3.14***	***3.07***	*2.70*
Amerford Int'l	*3.08*	*2.96*	*2.85*	*2.20*
Associated Air Freight	***3.33***	***3.22***	***3.33***	*2.68*
Circle Air Freight	*2.90*	*2.86*	*2.97*	*2.45*
Dynamic Air Freight	***3.25***	*2.67*	*2.83*	*2.42*
Kintetsu World Express	***3.28***	***3.21***	***3.29***	*2.54*
MSAS Cargo Int'l	***3.34***	***3.45***	***3.41***	***3.00***
Northern Air Freight	***3.24***	***3.27***	***3.09***	***3.09***
Panalpina	*3.11*	***3.17***	***3.16***	*2.56*
Pilot Air Freight	***3.37***	***3.33***	***3.22***	***3.12***
Profit Freight Systems	***3.22***	***3.24***	***3.26***	*2.96*
Right-O-Way, Inc.	*2.91*	*2.74*	*2.65*	*2.36*
Schenkers	*2.55*	*2.55*	*2.69*	*2.37*
Seko	*3.08*	***3.23***	***3.23***	***3.00***
WTC Airfreight	*3.09*	***3.09***	*3.04*	*2.76*

SURFACE EXPRESS CARRIERS	SERVICE	CONV.	PRICE	SALES
AVERAGE*	***3.38***	***3.31***	***3.56***	***2.12***
Purolator	***3.46***	***3.34***	*3.36*	*2.44*
Roadway Package System	*3.13*	*3.18*	***3.68***	*2.88*
United Parcel Service	***3.87***	***3.87***	***3.91***	*2.24*
U.S. Postal Service	*2.57*	*2.34*	*2.94*	*1.20*

AIR EXPRESS CARRIERS (SMALL PACKAGE)	SERVICE	CONV.	PRICE	SALES
AVERAGE*	***3.61***	***3.54***	***3.31***	***2.38***
Airborne Express	*3.37*	*3.35*	***3.49***	*2.41*
Burlington Air Express	*3.52*	*3.43*	***3.44***	*2.75*
DHL	***3.71***	*3.45*	*3.17*	*2.67*
Emery Worldwide	*3.05*	*3.09*	*2.82*	*2.44*
Federal Express	***4.44***	***4.32***	***3.40***	*2.90*
Purolator	*3.33*	*3.23*	*3.28*	*2.23*
TNT Skypak	*3.14*	*2.93*	*2.72*	*2.03*
United Parcel Service	***3.92***	***3.91***	***3.78***	*2.25*
U.S. Postal Service	*2.72*	*2.70*	*2.95*	*1.31*

** Averages calculated on basis of data for all carriers in category, not just those listed.*

AIR FORWARDERS & EXPRESS

The conventional forwarder group suffered in all performance categories, especially service. The main problem, according to Pat Downing, traffic manager of CBC Industries in Los Angeles, is long-term consistency.

"When we first start using a forwarder, it is extremely responsive," says Downing. "Then things begin to slip. Pickups get missed. Billing errors don't get resolved. The forwarder just loses interest in the accounts he thinks he has in the bag. The only answer is to move on to another forwarder, where the pattern usually is repeated."

Surface express companies again earned high marks for service and convenience. The scores for price were the highest in the express group and second highest in the whole survey. Sales marks, however, were the lowest among all carriers. Shippers criticized these carriers for depending too much on drivers and telemarketing for shipper/carrier communications.

Air express carriers enjoyed the highest marks among all air carriers. "Service levels, transit time, and special reports are generally terrific with the overnight carriers we use," says Lynne Smith, administrator of transportation and shipping for NCR Corp. in Mountain View, Calif. "The only constructive criticism I would make is the lack of personal attention a branch location like ours receives. Our headquarters people do all the negotiations, so these carriers tend to take the business from branch locations for granted. We're the ones who really need the communications with the carrier reps. This year we have been asked by our corporate people for more input on the carriers, so it certainly is in the interest of the local carrier reps to call on us and give us the information we need. The service continues to be good, but no one likes to be ignored."

AIR CARRIERS

PASSENGER/CARGO AIRLINES	SERVICE	CONV.	PRICE	SALES
AVERAGE*	***3.35***	***3.25***	***3.11***	***2.36***
Air Canada	***3.50***	*3.05*	***3.21***	*1.94*
Air France	*2.92*	*3.00*	*2.92*	*1.50*
Alaska Airlines	***3.82***	***3.73***	***3.55***	*2.36*
Alitalia	***3.62***	***3.38***	***3.62***	*2.92*
American Airlines	***3.47***	***3.40***	***3.15***	*2.76*
British Airways	*3.26*	*3.05*	*3.00*	*2.19*
Continental Airlines	*3.00*	*2.73*	*3.06*	*1.73*
Delta Airlines	***3.75***	***3.57***	***3.15***	*2.53*
Eastern Airlines	*2.41*	*2.75*	*2.64*	*1.93*
Japan Air Lines	***4.05***	***3.84***	***3.11***	*2.67*
KLM	***3.65***	***3.35***	***3.24***	*2.13*
Korean Airlines	***3.79***	***3.54***	***3.15***	*2.38*
Lufthansa	***3.97***	***3.63***	***3.17***	*2.66*
Northwest	*2.47*	*3.03*	*2.97*	*1.88*
Pan American	*2.44*	*2.38*	*2.69*	*2.13*
Piedmont	***3.63***	***3.33***	***3.37***	*2.08*
Sabena Belgian Airlines	*3.18*	***3.27***	*2.91*	*2.30*
TWA	*3.34*	***3.25***	*3.04*	*2.74*
United Airlines	***3.55***	***3.45***	***3.24***	*2.52*
USAir	*3.11*	***3.26***	*3.03*	*2.52*

ALL CARGO AIRLINES/FORWARDERS	SERVICE	CONV.	PRICE	SALES
AVERAGE*	***3.58***	***3.52***	***3.24***	***2.54***
Airborne Express	*3.18*	*3.17*	*3.17*	*2.25*
Burlington Air Express	*3.41*	*3.30*	***3.50***	*2.77*
CF AirFreight	*3.21*	*3.28*	*3.19*	***3.12***
DHL	***3.60***	*3.40*	*2.97*	*2.36*
Emery Worldwide	*3.22*	*3.13*	*2.71*	*2.37*
Federal Express	***4.37***	***4.24***	*3.23*	*2.82*
Flying Tigers	*3.13*	*3.14*	*3.11*	*2.57*
Nippon Cargo Airlines	*2.88*	*2.53*	*3.13*	*2.80*
United Parcel Service	***3.88***	***3.88***	***3.87***	*2.17*

** Averages calculated on basis of data for all carriers in category, not just those listed.*

AIR CARRIERS

The scheduled airlines received widely varying scores, indicating that some combination passenger/cargo carriers are interested in doing business directly with shippers, while others are not. Shippers generally were satisfied with elements of service such as on-time pickup and delivery.

"Pricing isn't an issue with the scheduled air carriers," says Pat Downing, traffic manager for CBC Industries in Los Angeles. "Most rates are fair; there is surprisingly little difference among them." Sales scores are again low for both combination carriers and all-cargo airlines. With few exceptions, air carriers call on forwarders rather than shippers.

All-cargo airlines, especially the overnight service carriers, received outstanding scores for service and convenience. "Nobody's perfect, but these overnight carriers are close," says Pat Downing. "We're on-line with them so there is little paperwork. The bar-coded tracing is great, and their second-day service is a bargain since 60 percent of the shipments arrive next day."

Shippers also praise the all-cargo carriers that have invested in freight hubs, large ground fleets and dedicated lift. "These air carriers are showing the whole transportation industry how to be in the freight business," says Downing.

Overnight carriers attempting to increase their international business get mixed reviews. "One carrier touting itself as an international express company bungled several simple shipments from Canada to Oregon," says Jim Strehl, purchasing agent for Fluid Air Components in Eugene, Ore. "They blamed Canadian customs. But another express carrier we use hasn't had a service failure in three years from points all over the world. If a carrier calls itself international, it has to perform regardless of the difficulties."

RAIL CARRIERS

CARRIERS	SERVICE	CONV.	PRICE	SALES
AVERAGE*	**3.26**	**3.16**	**3.07**	**2.78**
Burlington Northern	**3.73**	**3.57**	**3.70**	**3.07**
CSX	3.06	3.00	2.85	2.86
Canadian National	3.23	3.14	2.95	2.86
Canadian Pacific	**3.50**	3.11	2.94	**3.00**
Chicago & North Western	3.20	3.06	**3.15**	2.56
Conrail	3.21	3.00	3.06	2.64
Delaware & Hudson	1.06	1.57	1.63	1.53
Denver & Rio Grande	**3.70**	**3.35**	**3.33**	2.91
Florida East Coast	**4.00**	**3.60**	**3.30**	2.80
Grand Trunk Western	**3.39**	**3.33**	**3.39**	**3.11**
Illinois Central	**3.38**	**3.19**	**3.26**	2.55
Kansas City Southern	**3.33**	**3.39**	3.00	**3.00**
Missouri-Kansas-Texas	**3.40**	**3.43**	**3.57**	**3.14**
Norfolk Southern	**3.48**	**3.41**	3.05	2.98
St. Louis SW Railway	3.16	**3.39**	**3.28**	**3.11**
Santa Fe	**3.51**	**3.29**	2.91	2.76
Soo Line/Milwaukee Road	2.96	2.67	2.75	2.29
Southern Pacific	2.68	3.00	2.63	2.44
Union Pacific Railroad	**3.57**	**3.30**	**3.21**	**3.05**

RAIL FORWARDERS, AGENTS & CONSOLIDATORS	SERVICE	CONV.	PRICE	SALES
AVERAGE*	**3.51**	**3.51**	**3.44**	**3.17**
Alliance Shippers	3.29	3.27	**3.67**	2.73
Am. President Dist. Services	**3.57**	**3.62**	**3.52**	**3.48**
Greater South Traffic	**3.65**	**3.83**	**3.61**	**3.50**
The Hub Group	**3.82**	**3.89**	**3.67**	**3.94**
ITOFCA	3.00	2.92	2.92	2.83

RAILCAR BUILDERS & LESSORS	SERVICE	CONV.	PRICE	SALES
AVERAGE*	**3.46**	**3.46**	**3.27**	**3.36**
GATX	**3.54**	3.38	2.85	3.08
GE Railcar	2.94	3.00	3.13	2.50
Pullman Leasing	**3.56**	3.22	**3.30**	**4.00**
Union Tank	**4.00**	**3.92**	**3.58**	**3.83**

STACK TRAIN SERVICES	SERVICE	CONV.	PRICE	SALES
AVERAGE*	**3.69**	**3.60**	**3.69**	**2.97**
Am. Pres. Intermodal	**4.24**	**4.19**	**3.95**	**3.24**
Burlington Northern	**4.00**	**3.82**	3.60	2.83
CSX/Sea Land	3.55	3.58	3.33	**3.00**

** Averages calculated on basis of data for all carriers in category, not just those listed.*

RAIL SERVICES

Rail carriers' scores were either high or low; there wasn't much middle ground. "Rail service is improving," says Tony Reed, corporate transportation manager for Payless Cashways in Kansas City, Mo. "We're about halfway there. There are still a lot of railroads on the fence in terms of what their role is."

Sales scores generally were low. A big complaint among shippers is the growing dependence on telemarketing. "I have an aversion to 800 numbers," says Joyce Soules, traffic manager for Commodities Reserve in San Francisco. "Even for something as simple as a rate, I rarely get a call back before the freight is shipped and delivered. It's just not a responsive way to deal with shippers."

Rail third parties received higher scores than last year. "This group is gaining market share because they've gone from being talkers to being good listeners," says Tony Reed. "They've become realists; they know they're not going to take all your business, so they go one segment at a time."

Reed's definition of a good rail carrier? "They do what they say they can do. The trains run on time. No forked tongues. They try hard," he says. "They know that if it's good for you, it's good for them. They don't try to be all things to all people."

Railcar builders and lessors again received high marks, including the highest sales scores for any group. "The sales people are knowledgeable about the equipment and what they can do," says Gary Baumgartner of Washington Public Power Supply.

Stack train operators were rated for the first time this year, and generally they received high marks. "Stack train service gives us an alternative to TL and piggyback," says Tony Reed. "The niche for this service will continue to grow if the pricing remains fair and the service holds up."

METHODOLOGY

DISTRIBUTION's *Quest For Quality* survey is a rating of transportation companies by the shippers who use them regularly.

The data was gathered from questionnaires for each mode of transportation that were bound into monthly issues of DISTRIBUTION. Each questionnaire included the name of major carriers of that mode or vendors of a particular service. Each questionnaire also included space for write-ins. The questionnaires were bound in as follows:

January—Motor Carriers
February—Air Freight Carriers, Forwarders, Air Express Companies and Surface Express Companies
March—Rail Carriers, Agents, Stack Train Operators and Railcar Lessors
April—Water Carriers

Each questionnaire was reviewed for genuineness. No photocopies were accepted, and only questionnaires on which the respondent identified himself and his company were counted. A total of 108 questionnaires were rejected for noncompliance. Any questionnaire that appeared to be filled out by a carrier or at the behest of a carrier was checked out. A total of 89 ballots turned out to be carrier-initiated and had to be rejected.

Exactly 1,200 questionnaires qualified completely. Each of these questionnaires was coded according to state and standard industry code.

DISTRIBUTION asked respondents to rate the carriers and vendors they use in the following performance categories:

- *Service—transit times, routing and equipment.*
- *Convenience—billing, tracing, EDI capability, claims settlement.*
- *Price—rate levels and fairness, contract price levels and terms.*
- *Sales—salesmen's knowledge of their company's capabilities and the customer's needs.*

Shippers rated carriers they use regularly on a scale of 0 (unacceptable) to 5 (outstanding).

The ratings for each carrier appearing in this report were calculated by multiplying the number of votes by their point value. Total points were then divided by the number of shippers evaluating the carrier to find the average. For example, the rating for XYZ Company's service would be calculated as follows:

Range	*Respondents*	*Value*
0	*100*	*0*
1	*30*	*30*
2	*90*	*180*
3	*20*	*60*
4	*230*	*920*
5	*110*	*550*
Total	*580*	*1740*

Average: 3.000

Category averages are the sum of all carrier averages received (not just those reported) divided by the number of carriers in the section. This report only includes ratings for carriers that received enough votes to allow statistically measurable results.

The Quality Carriers

DISTRIBUTION has designated a number of transportation companies as "Quality Carriers" (See page 28). Each of these carriers received ratings in all performance categories higher than the averages for their group. No company with a rating lower than 3.00 (just acceptable performance) in any category qualified as a "Quality Carrier."

No effort has been made to rank the carriers. A generalized ranking would be meaningless since each shipper has different priorities in terms of the importance of various performance categories. For example, some shippers may weigh service more heavily than convenience, and so on. Before any shipper can calculate which carrier has the "performance profile" it is looking for, it must establish a weighting for each category.

The simplest way to do this is to assign weighted point values to the four performance categories. For instance, take a total of 10 points and assign the appropriate weighting to service, price, convenience and sales effectiveness, based on the importance of each performance category to you.

After determining the weightings, multiply them times the reported scores for the various carriers. The carrier with the highest total of points after four categories have been extended is your best carrier.

Here's an example. Suppose your weighted scale of carrier performance characteristics is four points for service, three for price, two for convenience and one for sales effectiveness. The extended scores and total points for the XYZ Company would be:

Performance Category	*Reported Score*	*Weight Factor*	*Total Score*
Service	*3.000*	*4*	*12.000*
Price	*3.100*	*3*	*9.300*
Conv.	*2.800*	*2*	*5.600*
Sales	*2.500*	*1*	*2.500*
Total			*29.400*

A Caveat To Readers

In the past, certain carriers have attempted to use the ratings in our *Quest For Quality* survey as a competitive ranking system. We caution readers not to pay any attention to such manipulations of numbers and improper use of our survey. Such use is statistically meaningless. It also corrupts the intent of the survey.

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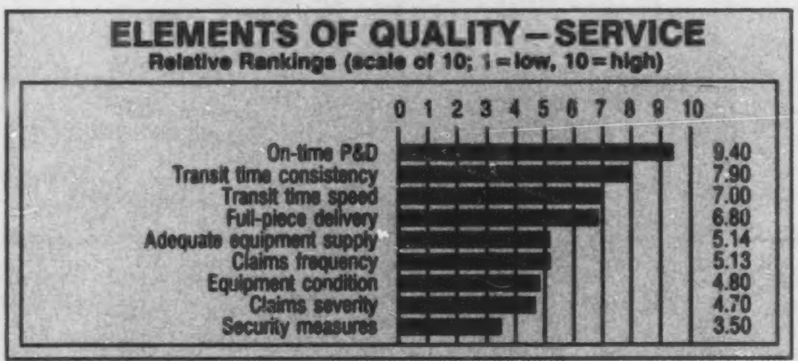
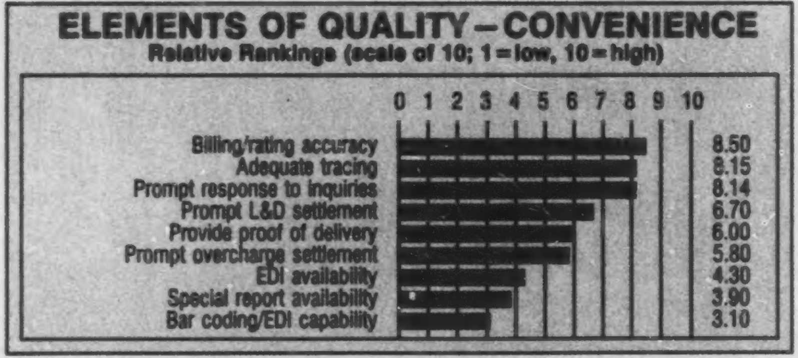
BASIC TRAINING

Hup, two, three, four—shippers sound off and tell us what quality means for them. Some of the answers may surprise you.

By Joseph V. Barks, Contributing Editor



Getting it there complete, safe and undamaged are still important considerations, but shippers' rankings of the elements of service quality make it clear that what really counts is just getting it there, period. And of the elements that relate to transit time, shippers leave little doubt as to which one they consider the most vital. Nearly 60 percent of the respondents said the most important building block of service quality is on-time pickup and delivery—the art and science of getting it there precisely when you say you will, no matter if you're the fastest, slowest or somewhere in between.



Convenience in freight transportation is far different than convenience in personal transportation, judging from our shippers' ratings. The key to making personal transportation convenient is providing unexpected extras, such as shuttle buses or extra check-in locations. Yet those who pay for freight transportation are looking primarily for the expected: bills that reflect quoted rates, tracing that eliminates guesswork and responsiveness to inquiries. At this point, most shippers still do not equate convenience quality with extra services like proof of delivery, bar coding, EDI, or customized reports. As shippers become more sophisticated, and more satisfied with basic carrier service, these innovations will become more important.

There often is a close connection between quality and the basics. Ivory Soap. Golden Books. Levi's jeans. Products perceived as simple, pure, and of unwavering quality. Made by companies with reputations for unrelenting attention to the fundamentals.

It's a connection that certainly is clear to DISTRIBUTION's readers. When more than 380 shippers responded to our call to define the elements of transportation quality, the message was unmistakable: Quality carriers are those that have mastered the basics. Computer age extras like EDI, tracing hotlines and rate diskettes are great, shippers say, but they won't make a quality carrier out of one that loses freight, delivers late, or doesn't have the right equipment.

What are the keys to helping carriers develop a basic, and therefore high quality, grasp of transportation operating principles? Some of our respondents rattled off the usual list of platitudes. Communication. Win-win attitudes. Partnerships. A mutual understanding of needs. But many went deeper, and provided pragmatic suggestions for what both carriers and shippers can do to infuse quality into the transportation process. Some of the more useful tips are included in the box on page 56.

Shippers also were asked to rank the elements of quality, on a scale of 1 to 10, within each of quality's four primary components: service, convenience, pricing, and sales effectiveness/communication. They then were asked to show, on a scale of 1 to 4, the relative importance of those four components as determinants of overall quality. Shippers also re-

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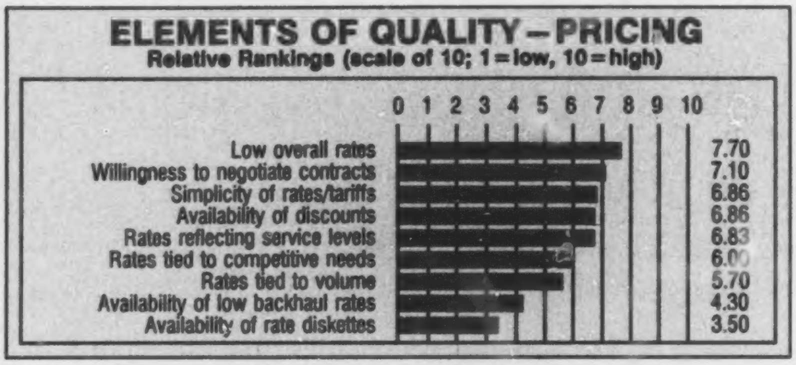
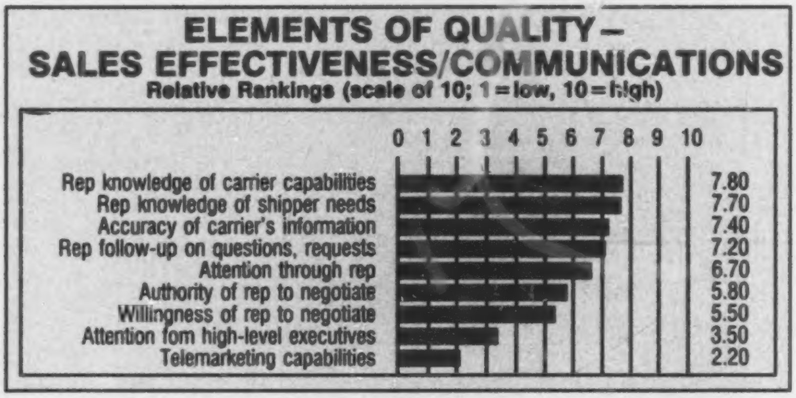


ELEMENTS OF QUALITY – PRICING
Relative Rankings (scale of 10; 1 = low, 10 = high)

The relative rankings depicted here show a fairly even dispersion of shipper opinion about what constitutes a "quality" price. Their true feelings come through much more strongly, however, when the percentages of number one rankings given to each element are analyzed. Just under one-third of the respondents indicated that first and foremost, a quality price is still a low one. The percentage of number one mentions for low overall price was twice as large as the top choice percentage for any other single element. Note here that handing a shipper a rate diskette is not likely to automatically create an impression of quality; unless, of course, the diskette contains those popular "low overall rates."



ELEMENTS OF QUALITY – SALES EFFECTIVENESS/COMMUNICATIONS
Relative Rankings (scale of 10; 1 = low, 10 = high)

Memo to high-level carrier executives: spend less time jetting around to shower your customers with lavish attention, and more time building solid training and sales operations back home. That's the message that comes through clearly from the shipper feedback about the elements of sales/communications quality. While shippers want ready access to top carrier management when necessary, a quality carrier, in their eyes, is one that makes sure the irate call to the president never becomes necessary. To do that, shippers say, carrier management needs to give sales reps the training, information, authority, and tools needed to be consistently responsive to shipper requirements. Only after the carrier has developed a solid, well-informed sales force, do promotion and direct contact with carrier executives become important (meaning credible) communications tools.

sponded to questions about: whether formal quality programs exist within their departments; who administers such programs; what techniques are used to measure and monitor quality; and the extent of communications with carriers about quality. The rankings and responses for these questions are summarized in the charts found on these pages.

Doing It Right

While the charts tell the specific story about how shippers define quality, here are some general "do and don't" guidelines that can be drawn from their responses:

Do Your Part. Shippers' responses reflected a keen sense of self-responsibility that extends far beyond "win-win" cheerleading. There was frequent acknowledgement that quality defects in transportation are just as likely to be traced to the shipper's operation as to the carrier's. Quality will not materialize, shippers made clear, unless the standard-setting and auditing processes include in-depth and continuous introspection, for every facet of the relationship: rate negotiation, shipment preparation, information exchange, post-delivery follow-up, etc.

Don't Push the Envelope. You can't paint a quality landscape with a spray gun, shippers indicated. The most effective efforts seem to be those that are focused on very specific objectives: on-time, damage-free, no complaints, etc., and confined to a manageable group of key carriers. Overly general or excessively ambitious programs, many respondents pointed out, create unwieldy administrative agendas that can quickly unravel enthusiasm and effectiveness.

Don't Spare the Glue. After writing "Communication!" three times, one respondent added a triple play of another "C" word that's heard far less often, but is equally critical: "Commit! Commit! Commit!" His sentiments were echoed by many other shippers who stressed that quality programs are sure to collapse if there's any hint they're held together more by a whim than a weld.

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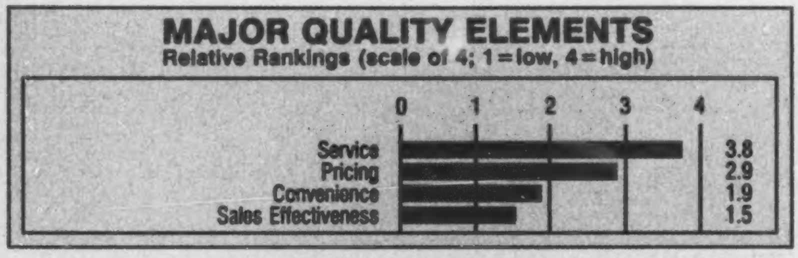
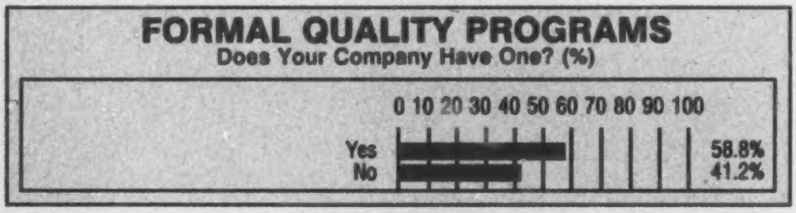


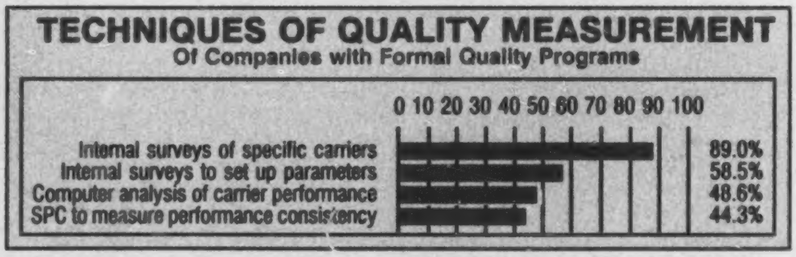
MAJOR QUALITY ELEMENTS
Relative Rankings (scale of 4; 1=low, 4=high)

There were days earlier in this decade, during the height of discount fever, when shippers unashamedly admitted that price was the key determinant of a carrier's value. Then there were days when the service/price factions were pretty evenly divided. But today, when the question is put to shippers in a quality context, service surges to the top. More than 78 percent of the respondents made it their number one choice. One respondent typified the current service/price sentiment this way: "You have to realize that there is a correlation between discounts and service. If your demands are for attentive service, you can't expect 'bargain basement' rates."



FORMAL QUALITY PROGRAMS
Does Your Company Have One? (%)

If you can imagine Don Johnson and Prince Charles at the same "black tie" function, you know that one person's definition of "formal" is another's idea of a downright undisciplined approach. Semantics aside, though, it appears that a surprising number of shippers still choose to low-key their efforts to define, communicate and implement quality standards.



TECHNIQUES OF QUALITY MEASUREMENT
Of Companies with Formal Quality Programs

Reflecting the informality that still seems to pervade the quality scene in transportation and logistics, many shippers that profess to have formal programs eschew the more precise measurement techniques (statistical process control and other computerized analyses) in favor of looser sets of internal surveys and standards.

Do More Than Routine Maintenance. Quality is definitely not a turnkey operation, respondents said. To keep it working over the long haul, program managers must be able to continually distinguish between correctable and untenable situations, and adjust appropriately to both. In the case of what can't be fixed, that means being willing to scale back a program's scope, reduce its complexity, or toss out carriers that just can't cut it.

Don't Forget Who's Boss. Many responses to our survey were coated with an uncharacteristic tinge of Alexander Haig-ism: the "I'm in charge here" approach. The respondents made it clear that "win-win" can only go so far; there comes a point when shippers who are serious about quality play their upper hand. "Never let the carrier forget who is paying the bills," said one respondent. "Remind them that Big Brother will be watching!" decreed another.

Elaborate Exceptions

Some respondents went beyond this basic framework and described more elaborate and sophisticated approaches for bringing quality to the transportation/distribution process. Several shippers described successful programs built around the principles of statistical process control, or the carrier performance measurement guidelines of the Automotive Industry Action Group.

In the final analysis, however, quality for our surveyed shippers still boils down most often to a by-the-numbers exercise. The quality "routine" currently in favor is best summarized in this list supplied by Barry R. Joy, production planning manager of Power Lawn Mower Parts, Rochester, N.Y.:

1) Let carriers know what the needs are.

2) Demand that needs be met (reasonable demands).

3) Monitor carrier performance.

4) Correct program as required (carrier replacement).

It's an approach that's bringing everyone to attention. ■

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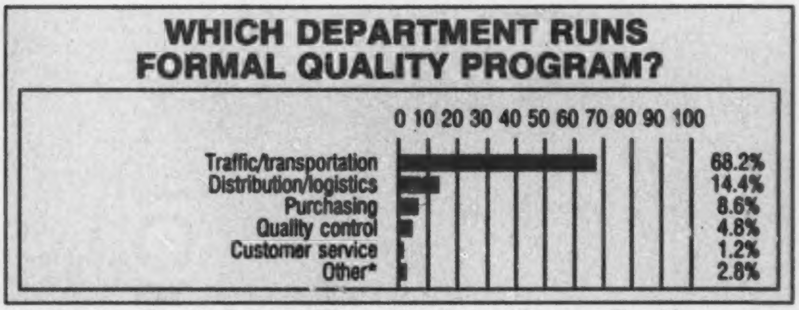
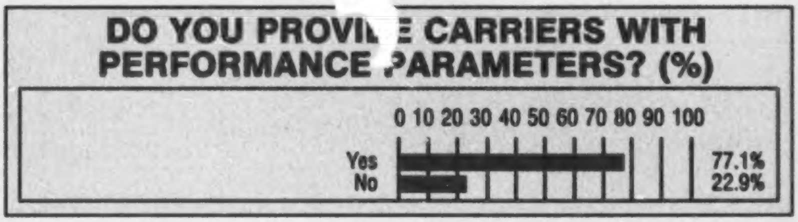


WHICH DEPARTMENT RUNS FORMAL QUALITY PROGRAM?

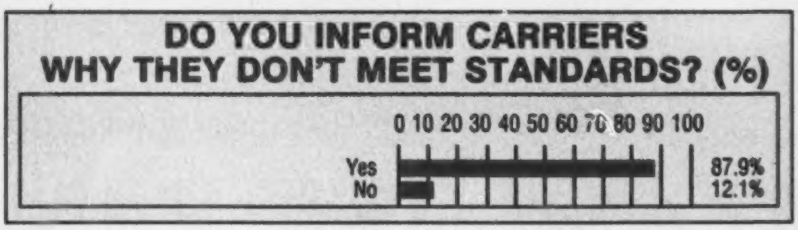
**Accounting, Freight Payment, Sales, Warehouse Manager, Top Management, Shipping Manager, General Manager, Finance*

The preponderance of traffic/transportation responsibility for implementation of programs seems to indicate that the quality movement in our field is still largely confined to the more mundane aspects of distribution performance. Remember, however, that this survey was specifically geared to quality in transportation. Many shippers also have separate programs, administered by distribution or logistics departments, that are focused on more wide-ranging and elaborate quality objectives.



DO YOU PROVIDE CARRIERS WITH PERFORMANCE PARAMETERS? (%)

As one would expect, given the respondents' obsession with communication as an indispensable springboard to quality, carriers certainly can't claim ignorance about shippers' efforts to bring more discipline to the transportation transaction.



DO YOU INFORM CARRIERS WHY THEY DON'T MEET STANDARDS? (%)

What's even less excusable than not knowing in the first place what the shipper's standards are? When a carrier slips up a second time, or fails to make a better showing in a subsequent bidding process. As these results show, shippers are extremely diligent about letting all carriers (those they use and those they reject) know where they stand—or fall.

TRANSPORTATION QUALITY: SOME SHIPPER TIPS

"Write letters to higher-ups to congratulate the underlings when goals are exceeded."—**Richard Isserman, Traffic Manager, Primo Co., St. Louis, Mo.**

"Hold carriers to the standards they present in sales presentations and advertising. Handing a sales rep a stack of delivery receipts showing sub-standard performance works well."—**Rodger J. Wills, Traffic Manager, Young Radiator Co., Racine, Wis.**

"Try to work with carriers when problems develop, but set a cutoff date if progress is not made."—**Michael Hayes, Distribution Manager, Hewlett-Packard, Rockaway, N.J.**

"Get the carrier's commitment, and 'get on their ass' if they don't perform."—**John P. Galvin, Manager, Mack Trucks, Inc., Hayward, Calif.**

"Get upper management recognition of the logistics function, to create the environment conducive to a quality management program."—**David H. Fuller, Director-Logistics, Bendix Transportation, South Bend, Ind.**

"Don't jump from carrier to carrier for small differences in pricing."—**Ann M. Corney, Traffic Manager, Rotor Controls, Rochester, N.Y.**

"Know when a certain discount means less quality."—**Jerry Richmond, Traffic Manager, Skyline Skylites, Colorado Springs, Colo.**

"Develop long-standing relationships so the carrier will eventually operate as a 'link' between the shipper and the customer, rather than simply as a transportation vehicle."—**Douglas Larkin, Distribution Manager, Baker Instruments, Winchester, Va.**

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MORE FREIGHT, LESS PROFIT FOR NATION'S CARRIERS

What a difference a year makes. In 1986, truckers turned in record profits. Last year they found holes in their pockets. And while the railroads enjoyed higher volumes and revenues, profit margins headed down the wrong track.

By Kurt Hoffman, Contributing Editor

Last year was a tough one for that large segment of the LTL industry—which unfortunately includes the industry leaders, thus ensuring a trickle-down effect—that simply can't say no to the discount war.

Rate adjustments taken in the first half of the year generally failed to hold, and companies had to eat the labor and fuel cost increases those rate hikes were intended to cover.

One of the more successful performers in 1987 again was Viking Freight System. One Viking official attributes much of the LTL industry's generally poor profit performance to a general lack of discipline by managers, particularly with regard to pricing.

"Too many motor carriers, some with good costing and pricing systems, have been pricing indiscriminately to gain short term market share," says David H. Hess Jr., senior vice president of marketing for Viking Freight System. According to Hess, there is a trend for shippers to forego the absolute emphasis on low freight rates in exchange for developing partnerships with carriers in situations where price/service packages tailored to specfic distribution needs can help both the shipper and carrier reduce their costs. "And only the low-cost, not low-price, carrier will survive," he adds.

The Big Three

Yellow Freight System reported a 15 percent gain in tonnage but a 46 percent drop in net income last year, from $74.4 million in 1986 to $40.2 million. Similar figures for the rest of the top trio reflected severe rate pressures among the LTL giants as they bought market share from smaller competitors. Consolidated Freightways boosted its tonnage by more than 10 percent, but saw profits drop by 23 percent, from $60.8 million to $46.3 million. And Roadway Express, while reporting a tonnage increase of nearly 12 percent, saw profits drop by close to a third, from $96.6 million to $66.9 million.

While many fingers pointed to Roadway Express as the discount leader, Graeme Lidgerwood, senior transportation analyst at First Boston, indicates that there's enough blame to go around. "We believe that the irresistible urge of most carriers to go after market share and excess industry capacity are probably more to blame for the intense rate pressure."

1988 To Date

Light could be at the end of the tunnel in 1988. Higher labor costs stemming from a new National Master Freight Agreement approved in April could put the skids, at least temporarily, to rate-slashing among the LTL biggies, most of which are union carriers.

Lidgerwood indicates that a greater degree of stability now is evident in the market. "The rate increases implemented earlier this year seem to be holding," she points

continued on p. 72

KEY PERFORMERS—TRUCKLINES

OPERATING REVENUE

Carrier	$ Million
Yellow Freight System	1,740.7
Roadway Express, Inc.	1,596.3
Consolidated Freightways	1,555.2
North American Van Lines	790.5
Overnite Transportation	543.1
ABF Freight System	526.3
Carolina Freight Carriers	472.6
United Van Lines, Inc.	419.4
ANR Freight System, Inc.	405.9
Allied Van Lines, Inc.	382.7
American Freight System	353.6
Transcon Lines	333.2
Preston Trucking Co.	318.9
Mayflower Transit	312.1

Carrier Finances

KEY PERFORMERS—TRUCKLINES

HIGHEST OPERATING RATIOS

Carrier	Operating Ratio
TNT Pilot	113.1
Smith's Transfer	111.0
Spartan Express	110.6
Red Arrow Freight Lines	110.1
Transus	107.9
American Freight System	107.1
CW Transport	106.6
Holmes Transportation	106.6
Ryder Freight System	106.2
North Penn Transfer	105.4
Auto Convoy	104.1
Transcon Lines	103.3
ANR Freight System	103.1
Refiners Transport	103.0
Lyons Transportation	102.8

LOWEST OPERATING RATIOS

Carrier	Operating Ratio
New Penn Motor Express	82.0
Estes Express Lines	82.5
J.B. Hunt	85.0
Overnite Transportation	86.9
Saia Motor Freight Line	86.9
Wilson Trucking Corp.	88.0
TNT Holland	88.1
Contract Freighters	88.4
Burnham Service Co., Inc.	88.5
St. Johnsbury Trucking	89.3
Marten Transport	90.2
Munson Transportation	90.3
AAA Cooper Transportation	90.4
Missouri Nebraska Express	90.7
Commercial Carrier Corp.	91.1
DSI Transports, Inc.	91.4

HOUSEHOLD GOODS CARRIERS SELECTED EARNINGS DATA

CARRIER & YEAR		OPERATING REVENUES ($ millions)	NET CARRIER OPERATING INCOME[1] ($ millions)	NET INCOME[2] ($ millions)	REVENUE TONS HAULED[3] (millions)	OPERATING RATIO[4] (percent)	RETURN ON EQUITY LESS INTANGIBLE PROPERTY (%)[5]
Allied Van Lines	1987	382.74	3.56	5.36	0.62	99.1	14.75
	1986	376.91	(0.34)	3.66	0.62	100.1	11.32
American Red Ball[7]	1987	27.64	0.38	0.31	0.05	98.6	38.30
	1986	25.58	0.55	0.82	0.05	97.8	61.41
Paul Arpin Van Lines	1987	31.32	1.38	1.00	0.05	95.6	33.77
	1986	28.27	1.40	0.89	0.05	95.0	32.30
Atlas Van Lines[7]	1987	182.59	10.58	0.56	0.28	94.2	-0-
	1986	179.76	12.55	1.55	0.27	93.0	-0-
Bekins Van Lines[7]	1987	207.06	0.16	0.61	0.37	99.9	1.99
	1986	197.55	1.98	1.46	0.33	99.0	4.46
Burnham Service Co.	1987	93.88	10.[illegible]	5.32	0.18	88.5	36.71
	1986	89.49	10.72	4.84	0.18	88.0	43.30
Global Van Lines[7]	1987	55.33	1.04	0.65	0.12	98.1	9.97
	1986	46.21	(0.58)	(3.92)	0.11	101.3	-0-
Graebel Van Lines	1987	62.12	1.12	0.48	0.07	98.2	9.82
	1986	50.16	2.96	1.42	0.06	94.1	38.65
Interstate Van Lines	1987	13.21	0.80	0.90	0.02	94.0	25.34
	1986	15.44	0.61	0.76	0.03	96.0	24.74
Mayflower[7] Transit Co.	1987	300.33	17.34	12.32	0.67	94.2	23.71
	1986	298.95	9.10	4.75	0.66	97.0	10.62
National Van Lines	1987	21.83	0.06	0.09	0.04	99.7	10.20
	1986	22.26	0.44	0.47	0.04	98.0	91.47
North American Van Lines[6]	1987	507.78	20.37	20.24	0.77	96.0	11.87
	1986	458.02	16.50	23.50	0.68	96.4	15.02
Pan American Van Lines[7]	1987	12.36	0.03	0.06	0.05	99.8	6.66
	1986	13.98	0.24	0.19	0.04	98.3	20.89
United Van Lines[7]	1987	405.90	3.88	(0.78)	0.80	99.0	-0-
	1986	382.89	6.20	1.66	0.69	98.4	5.80
Wheaton Van Lines	1987	44.61	2.51	1.62	0.07	94.4	9.60
	1986	40.66	2.40	1.72	0.06	94.1	11.26

[1] Net Carrier Operating Income—Difference between carrier operating revenues and carrier operating expenses.
[2] Net Income—After including fixed charges, non-operating income, income taxes, unusual or infrequent items, earnings attributable to discontinued segments, extraordinary items, and cumulative effect of changes in accounting principles.
[3] Revenue tons hauled reflects common and contract carrier service.
[4] Operating Ratio—Ratio of operating expenses to operating revenues.
[5] Return on Equity—Ratio of net income to shareholders' equity less tangible property at end of previous calendar year. The symbol -0- indicates a deficit in net income and/or shareholders' equity.
[6] North American Van Lines, Inc. conducts household goods and general freight operations, both of which are substantial in scope. In this report, the operating revenues, net carrier operating income, revenue tons hauled and operating ratio for North American reflect household goods operations only. Since the ICC's reporting requirements do not include an allocation of net income for carriers which provide dual service, the net income and return on equity for this carrier reflect both househould goods and general freight operations. Consequently, this report shows composite data for all carriers excluding North American Van Lines so that a better comparison can be made of data from household goods operations.
[7] Operating revenues, net carrier operating income, and operating ratio for Mayflower Transit Co., American Red Ball Transit, Atlas Van Lines, Inc., Bekins Van Lines Co., Global Van Lines, Inc., and United Van Lines, Inc. as shown above, reflect household goods operations only, but revenue tons hauled, net income, and return on equity represent the results from all their operations, including the transportation of general freight and household goods as well as income from household goods services (packing, crating, storage, etc.). The general freight operations of these carriers are insubstantial in comparison to their much larger household goods operations.

Source: Interstate Commerce Commission

MAJOR MOTOR CARRIERS SELECTED EARNINGS DATA

CARRIER & YEAR		OPERATING REVENUES ($ millions)	NET CARRIER OPERATING INCOME[1] ($ millions)	NET INCOME[2] ($ millions)	REVENUE TONS HAULED[3] (millions)	OPERATING RATIO[4] (percent)	RETURN ON EQUITY LESS INTANGIBLE PROPERTY (%)[5]
AAA Cooper Transportation	1987	92.11	8.85	7.37	0.75	90.4	32.95
	1986	77.82	9.39	5.07	0.65	87.9	24.57
ABF Freight System	1987	526.29	10.44	0.42	2.40	98.0	1.58
	1986	500.15	29.35	11.49	2.23	94.1	55.12
ANR Freight System	1987	405.92	(12.64)	(8.19)	2.89	103.1	-0-
	1986	397.44	0.23	(0.44)	2.73	99.9	-0-
A-P-A Transport Corp.	1987	118.92	8.46	5.90	0.67	92.9	22.51
	1986	108.72	14.58	6.35	0.50	86.6	26.47
Advance Transportation	1987	72.19	3.08	2.36	0.63	95.7	52.66
	1986	67.86	2.99	1.54	0.60	95.6	41.52
Allied Van Lines	1987	382.74	3.56	5.36	0.62	99.1	14.75
	1986	376.91	(0.34)	3.66	0.62	100.1	11.32
Alterman Transport	1987	53.95	1.51	0.62	0.47	97.2	3.84
	1986	52.05	0.83	0.22	0.46	98.4	1.34
American Freight System[6]	1987	353.55	(25.25)	(15.29)	2.21	107.1	-0-
	1986	300.57	6.77	4.12	1.77	97.7	14.90
Atlas Van Lines	1987	184.75	10.82	0.56	0.28	94.1	-0-
	1986	179.85	12.45	1.55	0.27	93.1	-0-
Auto Convoy	1987	64.72	(2.62)	(3.39)	1.25	104.1	-0-
	1986	68.16	1.11	0.88	1.32	98.4	5.34
Bekins Van Lines	1987	216.72	0.51	0.61	0.37	99.8	1.99
	1986	201.82	2.08	1.46	0.33	99.0	4.46
Bowman Transportation	1987	183.69	(4.97)	(2.75)	2.00	102.7	-0-
	1986	179.78	5.02	1.81	1.89	97.2	3.67
Brown Transport	1987	179.08	(3.34)	(5.76)	2.07	101.9	-0-
	1986	189.75	9.99	5.81	2.43	94.7	82.28
Burnham Service Co.	1987	93.88	10.76	5.32	0.18	88.5	36.71
	1986	89.49	10.72	4.84	0.18	88.0	43.30
CW Transport	1987	108.89	(7.19)	(4.41)	0.93	106.6	-0-
	1986	117.09	0.97	1.59	0.95	99.2	4.94
Carolina Freight	1987	472.63	24.08	12.47	2.35	94.9	13.90
	1986	474.03	35.49	17.48	2.77	92.5	25.11
Carretta Trucking	1987	57.28	3.75	1.75	1.91	93.5	15.87
	1986	56.51	3.82	1.64	1.92	93.2	17.70
Cassens Transport	1987	67.22	0.10	(0.18)	1.09	99.8	-0-
	1986	67.70	3.00	2.02	0.82	95.6	76.71
Central Freight	1987	196.17	14.31	10.94	2.32	92.7	12.69
	1986	195.81	8.41	4.59	2.39	95.7	5.61
Central Transport	1987	276.00	10.85	9.61	4.67	96.1	14.22
	1986	244.01	10.64	7.30	4.24	95.6	35.65
Chemical Leaman	1987	203.25	6.53	0.91	6.37	96.8	2.74
	1986	185.30	8.36	3.29	6.14	95.5	10.84
Churchill Truck Lines	1987	108.86	2.58	1.32	0.66	97.6	7.24
	1986	97.53	5.12	3.20	0.57	94.8	20.46
Commercial Carriers Inc.	1987	189.54	14.83	8.80	3.20	92.2	24.86
	1986	182.94	13.49	6.87	3.10	92.6	21.99
Commercial Carrier Corp.	1987	46.03	4.11	3.86	6.73	91.1	13.86
	1986	49.13	5.87	3.14	8.28	88.0	12.62
Consolidated Freightways	1987	1,555.22	76.72	46.26	6.18	95.1	10.81
	1986	1,467.33	111.22	60.77	5.60	92.4	15.82
Contract Freighters	1987	82.04	9.54	6.82	1.21	88.4	102.05
	1986	73.76	6.92	4.40	1.22	90.6	117.88
Convoy Company	1987	62.64	0.18	(0.12)	0.68	99.7	-0-
	1986	61.93	3.39	1.86	0.68	94.5	15.22
Jack Cooper Transport	1987	79.83	0.84	(0.70)	1.30	98.9	-0-
	1986	103.18	4.28	2.82	1.51	95.9	80.66

CARRIER & YEAR		OPERATING REVENUES ($ millions)	NET CARRIER OPERATING INCOME[1] ($ millions)	NET INCOME[2] ($ millions)	REVENUE TONS HAULED[3] (millions)	OPERATING RATIO[4] (percent)	RETURN ON EQUITY LESS INTANGIBLE PROPERTY (%)[5]
Crete Carrier Corp.	1987	89.01	5.07	3.28	1.61	94.3	16.66
	1986	80.30	3.21	2.55	1.47	96.0	14.86
DSI Transports	1987	55.24	4.73	1.96	2.78	91.4	27.71
	1986	51.22	5.39	2.01	2.62	89.5	15.95
Daily Express	1987	49.73	2.25	2.39	1.03	95.5	15.43
	1986	53.53	2.63	3.66	0.68	95.1	26.58
Dallas & Mavis	1987	65.02	3.80	2.09	0.92	94.2	18.44
	1986	42.35	1.67	0.66	0.53	96.1	6.03
Deaton	1987	55.69	3.69	3.23	1.63	93.4	15.40
	1986	53.15	4.36	3.33	1.62	91.8	18.76
E & L Transport	1987	97.37	0.30	0.49	1.19	99.7	7.06
	1986	93.19	1.85	0.94	1.12	98.0	14.16
Estes Express	1987	79.58	13.90	8.10	0.86	82.5	29.82
	1986	72.66	14.02	8.28	0.79	80.7	38.13
FFE Transportation	1987	83.26	3.01	2.10	0.87	96.4	30.65
	1986	90.07	1.49	0.66	0.96	98.3	9.32
Fleet Transport	1987	61.89	(0.99)	(1.96)	5.44	101.6	-0-
	1986	55.15	2.13	0.80	6.06	96.1	11.50
G. I. Trucking	1987	61.96	0.81	(0.17)	0.34	98.7	-0-
	1986	54.81	0.73	(0.02)	0.30	98.7	-0-
Global Van Lines	1987	61.04	1.03	0.65	0.12	98.3	9.97
	1986	52.74	(0.24)	(3.92)	0.11	100.5	-0-
Graebel Van Lines	1987	62.12	1.12	0.48	0.07	98.2	9.82
	1986	50.16	2.96	1.42	0.06	94.1	38.65
Groendyke Transportation	1987	66.96	1.29	0.46	4.52	98.1	25.67
	1986	60.13	1.66	0.89	3.47	97.2	6.48
Holmes Transportation	1987	57.58	(3.78)	(3.28)	0.42	106.6	-0-
	1986	61.32	0.61	0.57	0.45	99.0	4.21
J. B. Hunt Transport	1987	286.42	42.97	25.97	3.48	85.0	40.61
	1986	203.79	46.74	24.74	2.74	77.1	58.85
Hyman Freightways	1987	73.53	0.92	0.46	0.56	98.7	11.83
	1986	61.89	0.50	0.16	0.49	99.2	3.87
Jones Motor Co.	1987	74.60	0.83	1.24	1.48	98.9	19.06
	1986	83.27	1.53	1.72	1.64	98.2	30.59
Jones Transfer	1987	71.37	(1.04)	(2.95)	1.38	101.5	-0-
	1986	70.81	1.25	0.23	1.34	98.2	1.83
Jones Truck Lines	1987	188.30	11.11	(1.94)	1.30	94.1	-0-
	1986	176.20	13.22	6.21	1.16	92.5	11.37
Kenosha Auto Transport	1987	51.77	1.23	0.16	0.57	97.6	1.74
	1986	55.37	1.39	0.70	0.62	97.5	8.05
Leasway Motor Car Transport	1987	60.19	(0.97)	(1.89)	0.89	101.6	-0-
	1986	47.52	0.77	0.05	0.90	98.4	0.75
Lyons Transportation	1987	63.73	(1.76)	(1.64)	0.48	102.8	-0-
	1986	60.83	0.30	0.26	0.40	99.5	2.11
M&G Convoy	1987	117.97	7.52	4.67	1.43	93.6	28.67
	1986	106.69	5.32	3.59	1.33	95.0	25.52
McGil Specialized Carriers	1987	51.29	1.33	0.52	0.65	97.4	11.05
	1986	50.15	1.35	0.71	0.65	97.3	14.98
McKenzie Tank Lines	1987	45.86	2.71	2.69	4.62	94.1	12.27
	1986	46.36	4.78	3.29	4.21	89.7	17.68
Marten Transport	1987	57.56	5.62	2.44	0.80	90.2	31.84
	1986	52.46	6.85	2.93	0.71	86.9	63.36
Matlack	1987	204.30	2.85	(0.76)	8.10	98.6	-0-
	1986	203.27	5.51	0.11	8.00	97.3	0.36
Mayflower Transit	1987	312.07	13.99	12.32	0.67	95.5	23.71
	1986	311.95	8.45	4.75	0.66	97.3	10.62

Carrier Finances

MAJOR MOTOR CARRIERS SELECTED EARNINGS DATA

CARRIER & YEAR		OPERATING REVENUES ($ millions)	NET CARRIER OPERATING INCOME[1] ($ millions)	NET INCOME[2] ($ millions)	REVENUE TONS HAULED[3] (millions)	OPERATING RATIO[4] (percent)	RETURN ON EQUITY LESS INTANGIBLE PROPERTY (%)[5]
Melton Truck Lines	1987	47.94	0.19	0.21	0.98	99.6	1.96
	1986	52.53	(0.19)	0.01	1.20	100.4	0.08
Mercer Transportation	1987	60.26	2.80	2.75	1.02	95.4	39.23
	1986	57.07	2.58	2.52	1.01	95.5	54.58
Merchants Fast Motor	1987	76.39	(1.83)	(1.10)	0.91	102.4	-0-
	1986	79.56	(3.02)	(1.63)	0.97	103.8	-0-
Mid West Coast Transport	1987	70.75	2.67	1.61	0.80	96.2	18.30
	1986	69.22	2.46	1.42	0.77	96.4	19.32
Eck Miller Transportation	1987	54.92	0.79	0.77	1.39	98.6	14.89
	1986	61.13	1.47	1.20	1.32	97.6	30.57
Miller Transporters	1987	66.94	3.20	1.34	3.42	95.2	15.98
	1986	63.53	3.75	2.14	3.73	94.1	31.66
Missouri Nebraska Express	1987	70.19	6.50	4.37	0.72	90.7	32.55
	1986	56.37	5.81	2.47	0.61	89.7	168.97
Morgan Drive Away, Inc.	1987	49.59	1.48	1.11	0.67	97.0	16.05
	1986	55.00	0.54	0.42	0.65	99.0	6.55
The Motor Convoy, Inc.	1987	128.61	1.09	0.38	4.74	99.2	5.68
	1986	119.56	1.84	1.09	4.41	98.5	19.37
Munson Transportation	1987	66.09	6.43	3.20	1.35	90.3	63.73
	1986	49.87	5.07	1.43	1.05	89.8	40.10
National Carriers	1987	67.33	2.18	1.10	1.13	96.8	14.94
	1986	62.03	2.78	1.90	1.00	95.5	9.20
New Penn Motor Express	1987	95.46	17.17	9.71	0.70	82.0	25.73
	1986	84.77	15.41	8.65	0.64	81.8	29.23
North American Van Lines	1987	790.52	27.00	20.24	3.91	96.6	11.87
	1986	744.92	21.92	23.49	3.59	97.1	15.02
North Penn Transfer	1987	44.05	(2.40)	(2.68)	0.36	105.4	-0-
	1986	51.67	0.36	0.63	0.43	99.3	8.04
Northwest Transport	1987	131.93	11.08	6.88	0.67	91.6	16.82
	1986	110.42	14.14	8.02	0.53	87.2	24.47
Nu-Car Carriers	1987	142.92	8.31	2.93	2.85	94.2	21.87
	1986	133.72	7.65	2.14	2.48	94.3	19.48
Old Dominion Freight Lines	1987	106.32	0.11	(4.13)	1.01	99.9	-0-
	1986	104.52	1.50	(1.49)	0.98	98.6	-0-
Overnite Transportation	1987	543.13	71.05	23.52	3.95	86.9	9.30
	1986	529.74	84.66	43.74	3.73	84.0	20.47
Pacific Motor Trucking	1987	70.76	(1.79)	(1.40)	1.04	102.5	-0-
	1986	88.80	3.59	3.07	1.00	96.0	-0-
Pre-Fab Transit	1987	58.68	0.44	0.79	0.85	99.3	11.17
	1986	47.30	1.41	0.78	0.87	97.0	13.91
Preston Trucking	1987	318.85	(0.34)	3.17	2.31	100.1	3.28
	1986	320.63	10.69	5.20	2.30	96.7	5.38
Red Arrow Freight Lines	1987	48.89	(4.94)	(3.53)	0.67	110.1	-0-
	1986	52.54	(2.15)	(1.52)	0.65	104.1	-0-
Red Star Express	1987	114.44	7.27	5.71	0.63	93.6	14.92
	1986	111.56	10.82	6.19	0.60	90.3	23.00

CARRIER & YEAR		OPERATING REVENUES ($ millions)	NET CARRIER OPERATING INCOME[1] ($ millions)	NET INCOME[2] ($ millions)	REVENUE TONS HAULED[3] (millions)	OPERATING RATIO[4] (percent)	RETURN ON EQUITY LESS INTANGIBLE PROPERTY (%)[5]
Refiners Transport	1987	65.69	(1.98)	(3.49)	8.43	103.0	-0-
	1986	58.29	4.03	1.91	7.14	93.1	14.84
Roadway Express	1987	1,596.30	86.53	66.92	6.47	94.6	9.40
	1986	1,499.18	145.08	96.61	5.79	90.3	14.67
Riss International	1987	51.25	1.19	(0.36)	0.71	97.7	-0-
	1986	55.40	0.86	0.43	0.75	98.5	2.53
Ryder Freight System	1987	133.98	(8.26)	(6.21)	1.52	106.2	-0-
	1986	131.02	(7.75)	(6.67)	1.45	105.9	-0-
Saia Motor Freight	1987	62.59	8.22	1.31	0.73	86.9	7.10
	1986	55.18	6.42	6.85	0.65	88.4	27.92
St. Johnsbury Trucking	1987	284.20	30.31	7.94	1.84	89.3	19.21
	1986	260.17	26.68	11.68	1.66	89.7	27.66
Willis Shaw Frozen Express	1987	46.92	3.59	1.81	0.53	92.3	17.16
	1986	48.49	4.57	2.33	0.51	90.6	28.41
Smith's Transfer[6]	1987	240.25	(26.53)	(14.72)	1.40	111.0	-0-
	1986	363.62	2.79	(4.33)	2.01	99.2	-0-
Southeastern Freight	1987	101.86	5.75	5.85	1.06	94.4	28.55
	1986	88.95	10.66	10.18	0.93	88.0	58.25
Southwestern Motor Transport	1987	47.81	1.13	0.78	0.50	97.6	4.92
	1986	42.39	(0.45)	(0.37)	0.40	101.1	-0-
Spartan Express	1987	62.48	(6.64)	(4.48)	0.66	110.6	-0-
	1986	50.35	(0.78)	(0.74)	0.59	101.6	-0-
TNT Holland Motor Express	1987	144.01	17.16	8.17	1.25	88.1	26.55
	1986	124.13	15.63	7.29	1.05	87.4	22.50
TNT Pilot	1987	167.10	(21.91)	(25.28)	1.08	113.1	-0-
	1986	181.12	(4.57)	(7.43)	1.16	102.5	-0-
Transcon Lines	1987	333.16	(11.04)	(19.83)	1.85	103.3	-0-
	1986	343.55	10.62	2.32	1.82	96.9	5.72
Transus	1987	75.73	(5.98)	(0.30)	0.79	107.9	-0-
	1986	96.51	1.65	1.76	0.87	98.3	6.98
Tri-State Motor Transit	1987	103.18	(0.44)	(1.26)	0.84	100.4	-0-
	1986	115.74	5.42	4.43	0.89	95.3	23.27
United Van Lines	1987	419.41	(3.57)	(0.79)	0.80	100.9	-0-
	1986	397.65	1.07	1.66	0.69	99.7	5.80
Viking Freight	1987	185.95	7.94	4.38	1.30	95.7	9.71
	1986	170.89	10.47	4.70	1.17	93.9	11.85
Watkins Motor Lines	1987	146.70	6.31	1.42	0.56	95.7	8.10
	1986	127.07	5.25	1.95	0.46	95.9	11.04
Willig Freight	1987	68.63	4.64	2.19	0.54	93.2	17.60
	1986	62.62	4.47	2.84	0.50	92.9	23.93
Wilson Trucking	1987	55.46	6.64	4.16	0.48	88.0	19.40
	1986	51.77	6.96	3.80	0.43	86.6	21.09
Yellow Freight	1987	1,740.70	73.24	40.20	6.86	95.8	10.72
	1986	1,619.18	136.89	74.43	5.97	91.5	23.75

[1] Net Carrier Operating Income – Difference between carrier operating revenues and carrier operating expenses.

[2] Net Income – Net income after including fixed charges, non-operating income, income taxes, unusual or infrequent items, earnings attributable to discontinued segments, extraordinary items, and cumulative effect of changes in accounting principles.

[3] Revenue Tons Hauled reflect common and contract carrier service.

[4] Operating Ratio – Ratio of operating expenses to operating revenues.

Source: Interstate Commerce Commission

[5] Return on Equity – Ratio of net income to shareholders' equity less intangible property at end of previous calendar year. The symbol -0- indicates a deficit in net income and/or shareholders' equity.

[6] 1987 data shown above for Smith's Transfer Corp. reflect operations from January 1, 1987 to September 30, 1987. Since this carrier merged into American Freight System on October 4, 1987, the results of operations over Smith's Transfer system from October 1, 1987 to December 31, 1987 are included in the data reported by and shown above for American Freight System. Although data for Smith's Transfer are shown separately above, American Freight System and Smith's Transfer are considered one carrier for this report.

Carrier Finances

CLASS I FREIGHT RAILROADS SELECTED EARNINGS DATA

CARRIER & YEAR		OPERATING REVENUES ($ millions)	NET CARRIER OPERATING INCOME[1] ($ millions)	NET INCOME[2] ($ millions)	REVENUE TONS HAULED[3] (millions)	OPERATING RATIO[4] (percent)	RETURN ON EQUITY LESS INTANGIBLE PROPERTY (%)[5]
Atchison, Topeka & Santa Fe[5]	1987	1,969.1	103.3	116.8	116.8	72.00	3.57
	1986	1,951.7	(51.9)	(62.7)	(62.7)	67.14	-0-
Boston & Maine	1987	85.5	(7.3)	10.5	10.5	1.73	-0-
	1986	86.3	(4.9)	3.0	3.0	1.65	-0-
Burlington Northern[5] [6]	1987	4,028.7	361.3	361.8	361.8	206.3	9.27
	1986	3,733.0	63.9	81.1	(254.7)	188.2	1.40
CSX Transportation[5]	1987	4,634.2	374.8	337.3	394.5	144.00	5.88
	1986	4,528.8	342.9	329.3	329.3	132.81	5.55
Chicago & Northwestern	1987	777.1	33.4	19.9	17.2	27.81	3.23
	1986	823.6	34.5	36.0	36.0	26.98	3.34
Conrail	1987	3,180.1	234.2	267.0	299.0	81.07	4.30
	1986	3,088.1	279.7	315.7	431.1	74.61	5.37
Delaware & Hudson	1987	80.9	(5.6)	(7.8)	(7.8)	2.89	-0-
	1986	80.4	(11.8)	(13.5)	(13.5)	2.63	-0-
Denver & Rio Grande Western	1987	261.0	9.4	6.5	6.5	10.86	2.35
	1986	285.3	17.9	22.7	22.7	11.13	4.43
Florida East Coast	1987	130.3	11.1	29.6	29.6	3.79	6.75
	1986	121.2	11.4	25.4	25.4	3.65	7.06

CARRIER & YEAR		OPERATING REVENUES ($ millions)	NET CARRIER OPERATING INCOME[1] ($ millions)	NET INCOME[2] ($ millions)	REVENUE TONS HAULED[3] (millions)	OPERATING RATIO[4] (percent)	RETURN ON EQUITY LESS INTANGIBLE PROPERTY (%)[5]
Grand Trunk Western	1987	307.7	(5.7)	0.3	3.4	4.89	-0-
	1986	323.0	(26.4)	(16.4)	(16.4)	5.15	-0-
Illinois Central Gulf[5]	1987	548.6	35.5	1.5	1.5	16.95	3.59
	1986	679.5	(189.8)	(171.7)	(171.7)	18.92	-0-
Kansas City Southern[5]	1987	305.8	36.3	31.3	31.3	11.55	11.31
	1986	299.9	0.6	(3.0)	(3.0)	11.37	0.17
Missouri-Kansas-Texas	1987	241.8	22.8	23.1	23.1	9.71	6.77
	1986	232.7	6.3	6.8	24.7	8.10	1.82
Norfolk Southern[5]	1987	3,335.6	3.6	168.3	168.3	94.3	0.06
	1986	3,327.8	346.6	505.2	505.2	91.5	7.69
St. Louis Southwestern[5]	1987	374.1	29.6	33.1	33.1	14.00	6.50
	1986	360.6	(34.7)	(26.5)	(2[illegible].5)	12.47	-0-
Soo Line[5]	1987	589.4	9.4	(0.8)	(0.6)	21.94	1.17
	1986	606.3	(28.2)	(35.0)	(35.0)	19.50	-0-
Southern Pacific[5]	1987	1,925.3	27.4	168.5	168.5	67.01	0.99
	1986	1,909.0	(292.1)	(254.3)	(254.3)	62.53	-0-
Union Pacific[5] [7]	1987	3,847.9	478.8	422.0	422.0	157.22	10.08
	1986	3,766.9	50.9	4.7	4.7	136.81	1.30

[1] Net Operating Income – Difference between operating revenues and the total of railway operating expenses, railway tax accruals and net equipment and joint facility rents.

[2] Income Before Extraordinary Items – Net income after including fixed charges, non-operating income, unusual or infrequent items and earnings attributable to discontinued segments but before extraordinary items and cumulative effect of changes in accounting principles.

[3] Net Income – Net income after extraordinary items and cumulative effect of changes in accounting principles.

[4] Return on Net Investment – Ratio of railway operating income to net investment in railway property used in transportation services at end of previous calendar year. The latter includes an allowance for working capital based on the ICC's Rail Form A formula. Accumulated deferred income tax reserves have been subtracted from the net investment base in accordance with the modification approved by the Commission in Ex Parte No. 393 (Sub No. 1), "Standards for Railroad Revenue Adequacy," served December 31, 1986. If net investment data as of the end of each quarter were available, returns on investment would be computed using an average of the net investment at the beginning and at the end of the respective twelve-month periods. However, net investment data is generally only available at the end of the calendar year; a substantial portion of this data is derived from annual reports (Form R-1) of Class I line-haul railroads which are required to be filed with the Commission by March 31 of the following year. Thus, the net investment data used for this report which represent the latest available end-of-calendar-year data are not averaged in order to assure that net railway operating income is more closely equated with the railroad assets generating this income. The symbol -0- for return on net investment indicates a deficit net railway operating income.

[5] Net railway operating income, income before extraordinary items and net income shown above were substantially reduced due to large accounting adjustments to record severence pay for employee buyouts and the write-down of assets attributable to freight car retirements and line abandonments.

[6] The large difference between Burlington Northern Railroad Company's net income before extraordinary items and net income for the 12 months ending December 31, 1986 is attributable to a $335.8 million charge representing the cumulative effect of a change in accounting principles. This change represents a retroactive adjustment effective January 1, 1986, of property acquisitions of prior periods to reflect a change in method of depreciation.

[7] Union Pacific, in its income statement for the year 1986, recorded $659.7 million of adjustments for severence pay and asset write-downs as an unusual or infrequent expense item. In order to provide uniformity and consistency with the reporting by other Class I railroads in 1985, 1986 and 1987 of similar costs associated with major restructuring programs, net operating income shown above for Union Pacific for the year 1986 has been adjusted to reflect these expenses as operating expenses. The related tax benefits ($303.3 million) attributable to these expenses had already been recorded in the net operating income. Consequently, as shown in footnote 5 above, the net impact on Union Pacific's earnings from this adjustment for the year 1986 is $356.4 million (total costs of $659.7 million less related tax benefits of $303.3 million).

Source: Interstate Commerce Commission

KEY PERFORMERS – RAILROADS

OPERATING REVENUE

Carrier	$ million
CSX Transportation	4,634.2
Burlington Northern	4,028.7
Union Pacific	3,847.9
Norfolk Southern	3,335.6
Conrail	3,180.1

HIGHEST OPERATING RATIOS

Carrier	Operating Ratio
Burlington Northern	206.3
Union Pacific	157.22
CSX Transportation	144.00
Norfolk Southern	94.30
Conrail	81.07

out. "Some of these trucking companies are pretty hungry for revenue to compensate for the Teamster contract, so I think there's a little more price discipline being exercised in the market."

The big question, she says, is whether carriers, particularly the industry giants, will be able to watch their market share drop even a bit without succumbing to the temptation of buying freight.

"For example, Roadway reported sub-par improvements in tonnage in the second quarter, which I think is attributable to the fact that they have gotten a little firmer in terms of their rates," says Lidgerwood. "But historically, when Roadway has experienced softness in its tonnage growth, the company has tended to go back out and start bidding for traffic.

"None of the trucking companies like to lose market share," she says. "However, losing a little market share in exchange for getting better yields is starting to look like a better way to go."

Consolidated Freightways also has made progress boosting rates with some of its large volume accounts, but the carrier also has lost some accounts through those efforts, Lidgerwood adds.

Since labor costs devour between 55 and 60 percent of revenues, and the new Teamster contract should drive those costs up by at least 7 percent this year, trucking managers will appreciate the help they'll get on the fuel side. Mid-year prices for diesel fuel, another big factor on the truckers' cost index, already are several cents below prevailing prices in 1987, and the outlook is for a further decline in the third quarter.

The behavior of smaller and regional companies probably will help determine how long the industry giants will lay off the discount emphasis. A lot of these smaller players, with non-union labor or lower wage "white paper" contracts with the Teamsters, also could seize the opportunity to gain market share in specific lanes. It will be interesting to see whether their inroads will be of the dimension that will attract retaliation from the larger carriers or renewed interest by the Teamsters in their special contracts.

The Rail Carriers

Last year was a reasonably good year for the nation's freight railroads, as traffic gains generally provided opportunities for improved profit performance. However, while rail ton-miles jumped nearly 10 percent over the previous year, revenue per ton-mile dropped again for the fifth straight year, to 2.72 cents. As a result, railroad earnings were a mixed bag.

The latter half of 1987 gave cause for encouragement, says Sally Smith, a transportation analyst with Alex Brown & Son of Baltimore. "Rail traffic picked up last year, and after a number of years we finally saw rates begin to improve," says Smith. As a general rule, western railroads, helped by their more diversified operations in real estate, energy and other natural resource businesses, generally outperformed their eastern counterparts in 1987. Grain volumes were another contributing factor for the western carriers, as a weaker dollar helped generate export sales.

"Those positive trends that surfaced in the latter half of 1987 have continued so far this year," says Smith. "Traffic volumes are up, and the railroads have gotten rate increases this year that, for the most part, they've been able to maintain."

Railroads also should benefit nicely from the problems now plaguing waterway operators, she says. Drought conditions have lowered water levels on many of the nation's inland waterways, slowing or bringing to a halt thousands of barges. "On a short-term basis, or at least for the balance of the year, the drought generally is a plus for the railroads, although it may be a negative next year when there is less grain to move," says Smith. "Right now, there's plenty of grain in storage. Grain prices are high, which encourages sales. And since the barge industry is having terrible problems, more business will be shifted to the rails."

Low water levels also translates into less hydropower capacity. That, in turn, generates greater demand for coal, oil or gas to fire electric plants. Since railroads haul the coal and sell the resources, they stand to benefit on that front as well.

Clouding the rail industry outlook are some sticky labor problems that could erupt in a strike before the summer ends. While the industry for years has been reducing employment through buy-outs and other means, major railroads currently are negotiating new contracts with their unions. Management's intent clearly is to get work rule changes to boost productivity. In the hot seat is the Chicago & North Western Transportation Co. (CNW), which has been in combat with its unions over crew sizes and other issues for some time. An emergency board appointed by President Reagan suggested a compromise settlement, but CNW appears determined to take the bull by the horns, implement the company's planned program, and take a strike as early as Aug. 5.

"If a strike develops and is restricted to the CNW, it could last for a while and wouldn't necessarily have a dramatic effect on transportation systems or the economy," says Smith. If a strike spreads throughout the rail industry through secondary picketing, Congress probably will step in, end the strike and order an arbitrated settlement, she adds.

CNW isn't the only carrier positioned to take on the unions. The major unions at CSX Transportation this spring rejected the company's "gain-sharing" proposal, which would reduce its work force by about 10,000. As a result, CSX has started dipping into its $1.5 billion cash pool to pay people to leave. However, company officials are determined to lower their labor costs, and earlier this year indicated an unenthusiastic willingness to take a strike if necessary in order to accomplish those work force reductions. ■

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HOW TO BENCHMARK LOGISTICS OPERATIONS

Benchmarking – comparing your performance to a baseline – is a good way to gauge progress. Here's how to go about it.

By Dr. Joseph Cavinato, Contributing Editor

"Hey, how am I doing?" is Ed Koch's famous line. The feisty mayor of New York is basically doing a continuous benchmark study on how people feel about his performance. The key here is that he'd rather find out the bad news first, so that something can be done about it before it gets out of hand.

Benchmarking is a management technique that has caught on in the logistics field as a way to set operating norms, make comparisons against perceived "better" ways of doing things, and to set a basis for comparing future performance. Why the interest in benchmarking? Because it can help you improve against the competition, control costs, enhance customer service and survive during deregulation.

There are 11 basic approaches to benchmarking. They can be classified into a) comparing total performance against some other system, b) comparing performance of individual logistics components against others, c) using industry data sources, d) budgets, and e) creating your own logical efficiency norms.

- **Compare total distribution system performance against that of another company division.** An example here would be a specialty chemicals division of a firm observing and comparing total system costs and service performance with a sister paint division. The advantage here is the ease of information sharing.
- **Compare total distribution system performance against a major competitor.** Cost data is tough to obtain here, except for landed prices where these might be gleaned from customers. And total order cycle time, inventory availability, and other service attributes might often be determined through frank talks with customers. Many consulting firms perform blind surveys for clients to determine customer preference and gauge performance against competitors.
- **Compare total distribution system performance against a quality operation in use by a firm in another industry.** Cross-industry comparisons are useful in bringing fresh ideas into the firm that would not normally have been obtained through introspective studies or by looking at other firms in the same industry. Firms in a wide variety of industries have visited the order entry and shipping operation of L.L. Bean, for example. Comparisons outside the industry also are useful in keeping one step ahead of competitors within the industry.
- **Compare a specific logistics component against that in another division.** This would be the comparison of just traffic administration, order entry processes, warehouse picking, or other operational activities within the entire system. This is useful when specific nuts and bolts efficiencies are sought.
- **Compare a specific logistics component against that of a competitor's.** These are tough to measure unless sales or other departments in the company have reliable data on how the company must react to the competitor. Examples would be a faster order cycle time and using company trucks for service satisfaction of specific customers. The point here is that information about competitors often is tough to get. Often the only way to get information here is through customers, by hiring or interviewing key persons from the competitor, or by hiring a consultant who is a guru in that specific industry.
- **Compare a specific logistics component against that of anyone in the field.** A comparison between a cookie company private truck and that of an industrial pump company would be an example here. This kind of cross-industry component comparison is fine as long as the operating and service characteristics and competitive environments are similar in both industries, thus avoiding an apples/oranges problem. Purchasing managers often compare buying prices paid by their firms against transaction prices that are published in the field. Thus, the better buying tactics and strategies by the firm often are taught as follows: "While our prices paid increased by 3 percent, the industry average for this commodity was an increase of 5 percent. Thus, the 2 percent savings is attributable to the performance of our buyers."

continued

BENCHMARK YOUR LOGISTICS COSTS

($ million unless otherwise indicated)

Year Ending	GNP ($Trillion)	Inventory Carrying Costs	Transportation Costs	Administrative Costs	Total U.S. Logistics. Costs	% GNP
1971	1.08	47	91	5	143	13.2
1972	1.25	54	97	6	157	12.6
1973	1.33	65	108	7	180	13.5
1974	1.43	83	116	8	207	14.5
1975	1.55	73	116	8	197	12.7
1976	1.72	80	133	9	222	12.9
1977	1.92	88	150	10	248	12.9
1978	2.16	107	175	12	294	13.6
1979	2.42	133	193	14	340	14.1
1980	2.63	153	205	15	373	14.2
1981	2.94	178	236	17	431	14.7
1982	3.07	161	240	17	418	13.6
1983	3.31	142	244	15	401	12.1
1984	3.66	159	250	16	425	11.6
1985	3.89	157	265	18	440	11.3
1986	3.98	154	271	18	443	11.1

This data from the Department of Commerce can help you benchmark your logistics costs against your company's "GNP." The universe in this study was quite broad, but it still offers interesting comparisons.

• **Industry Source Data Comparisons.** Traditional industry-wide data gathered and reported by respected industry groups provide a baseline of data against which to compare the firm. Many consulting and data source firms provide cost data for transportation, inventory holding costs, and purchasing transaction prices. These often are useful in making comparisons between what are seen as "industry" averages and the costs of an individual firm. A caution with industry data: it often is a very broad average.

• **Budgets.** This is perhaps the most primitive form of benchmarking. It is used to make a comparison of individual or departmental performance against a pre-established norm. In this manner, it presents a boundary for comparison, but its usefulness typically ends there. It does not provide for good decision-making information; even flexible budgets are not effective for showing managers "what could have been," or "what should have been." Another negative feature of budgets is that they are internally driven and based upon past performance within that company. Positive benchmarking should reflect the directions and performances a company wants its managers to pursue. Budgeting is not benchmarking, yet some companies call it that.

• **Zero-Based Budgeting.** This means looking at everything in a distribution operation from the ground up. Nothing is taken for granted. A zero-based approach requires the justification, or rejustification, of all facilities, systems and people. While this can be useful in examining the entire system, it does not always contain an external view toward competitors or other firms. In too many instances, zero-based budgeting applications are directed toward showing how the sky will fall if any one of our 20 key workers were to be eliminated. Like regular budgeting, zero-based budgeting is not very effective as a true benchmark.

• **Baselining.** In the early 1980s General Electric established what it believed were efficient methods for administering a traffic group, managing inventories, and operating a warehouse. These baselines were obtained by studying good practices in a wide range of industries. They gave managers a basis with which to judge their own operations. The baseline approach is a valuable starting point for benchmarking.

• **Field Methodologies.** The field of logistics has had to develop most of its own approaches for accounting, measuring inventories, capturing the concepts of productivity, and other management applications. Much of this has been research sponsored and published by the Council of Logistics Management, (the early productivity studies and the more recent accounting studies in transportation and warehousing), the Warehouse Education Research Council (financial analysis of warehouse alternatives), and other industry organizations. These sources present sound methodologies for making specific internal, external and cross-industry analyses.

Top Down or Bottoms Up?

The "top down" approach to benchmarking looks at overall performance in times or costs. Then, attempts are made to cut or force-fit the individual operations to this new standard. The "bottoms up" approach looks first to the efficiencies of individual activities such as traffic, storage, handling, and packaging, then attempts to make these individually more efficient. The intent here is that attention to the individual parts will result in the whole being more effective. ■

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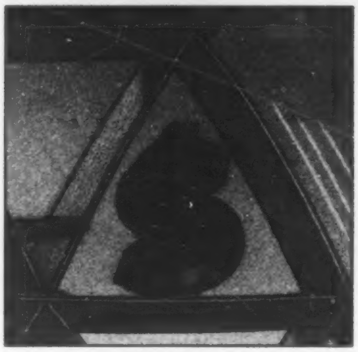
The budget is the most critical financial and operational plan a company has. It is also one of the few ways that the successes and failures of transportation and distribution are recognized by upper management. Yet the majority of managers with T&D responsibility dread the budgeting process because it can be so unsatisfying.



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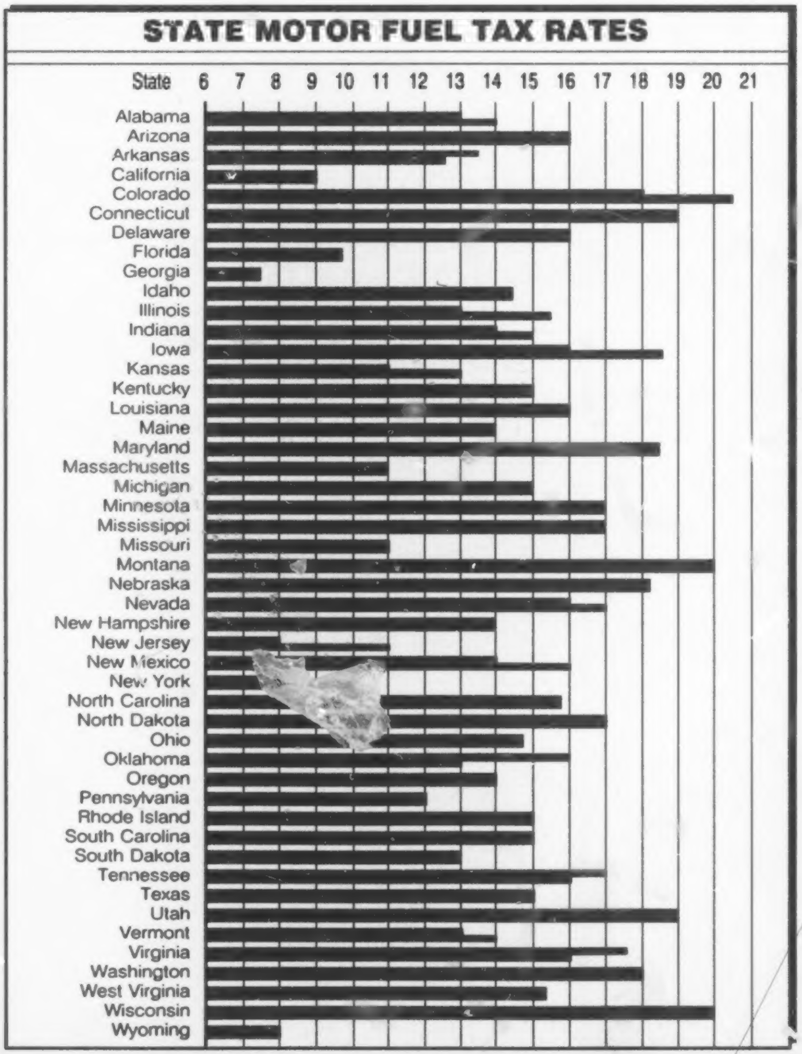
DISTRIBUTION's 1988 SITE LOCATION INDEX

Where's the best place to locate a new plant or distribution center? This handy guide should get your search moving in the right direction.



STATE MOTOR FUEL TAX RATES

The information presented in this feature was gleaned from a number of sources. Because it was impossible to convey, in these charts, the full extent of the details provided by these documents, it is recommended that the reader consult these primary sources where appropriate.

One of the most useful tools for evaluating the states is the "General Manufacturing Climates" study. Conducted annually by Grant Thornton, an accounting and management consulting firm, it rates the states according to 22 economic factors. Contact Grant Thornton, 1700 Prudential Plaza, Chicago, Ill. 60601.

Data on motor fuel taxation is available from the Highway Users Federation, 1776 Massachusetts Ave., N.W., Washington, D.C. 20036-1993.

Information on highway regulations, taxes, and reciprocity agreements is also available from the National Private Trucking Association (formerly the Private Carrier Conference), 2200 Mill Rd., Alexandria, Va. 22314.

FUEL TAX RATES represents the taxes imposed on motor fuels in cents per gallon. The bars are doubled, the upper segment indicating the tax on gasoline, the lower segment the tax on diesel fuel. In many cases the two fuels are taxed at the same rate. In addition to the basic rates, many states also impose additional mileage taxes, surcharges, etc. In the past year, 14 states raised one or both of their motor fuel tax rates. Increases were proposed in 19 other states, but were not enacted. Source: Highway Users Federation.

Site Location Index

MOTOR VEHICLE SIZE, WEIGHT AND ACCESS RESTRICTIONS

	height			width		length										weight				access						
						straight truck					tractor/ trailer															
	13'6"	14'	14'6"	96"	102"	35'	40'	45'	60'	see notes	60'	65'	70'	see notes	not specified	73,000 – 79,999 lbs	80,000 lbs	over 80,000	see notes	.5 miles	1 mile	3 miles	5 miles	10 miles	unlimited	see notes
Alabama	●			●			●				●						●				●					
Arizona	●			●			●								●		●								●	
Arkansas	●				●		●				●						●								●	
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Idaho		●			●		●								●		●								●	
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Maine	●				●			●				●					●									c
Maryland	●			●			●								●	●										d
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Washington		●			●		●								●										●	
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Wisconsin	●				●		●				●						●						●			
Wyoming		●			●				●		●							●							●	

MOTOR VEHICLE RESTRICTIONS outlines the size and width limitations observed by the various states. The limits described are those imposed on vehicles travelling on state and non-designated highways. Limits governing vehicles travelling on the insterstate system are governed by the provisions of the Surface Transportation Assistance Act. Also included in the chart are the restrictions limiting access to the designated interstate highway system. The limitations listed under the "length" heading are those for a 2-axle straight truck, and for 3-axle tractor, 2-axle trailer combinations. The limits listed are those in general application. Several exceptions or additional restrictions may be applied in some cases.

Notes, vehicle sizes and weights:

a – maximum length = 42 ft.
b – maximum lentgh = 36 ft.
c – maximum length = 42 ft., 6 in.
d – maximum length = 50 ft.
e – maximum 55 ft. wheelbase
f – maximum length = 59 ft.
g – maximum length = 53 ft.
h – maximum length = 75 ft.
i = maximum length = 53 ft.
j = maximum length = 48 ft.
k = maximum length = 57 ft.
l = maximum length = 48 ft.
m = 95,000 lb. w/ 7 alxes and permit

Notes, interstate system access provisions:

a – By permit only
b – Rural interchanges 1 mi. (2 lane) and 3 mi. (4 lane); urban interchanges 1 mi on crossroads with 12-ft. lanes. Other access by petition
c – Rural interchanges 2 mi., urban interchanges .5 mi.
d – Shortest practical route
e – By permit only
f – To facilities or for route continuance
g – By permit only for twins
h – By permit only for twins
i – 20 mi.
j – Permit required beyond 1,500 ft.
k – "very reasonable" access
l – All but local roads, twins not restricted
m – .2 mi.
n – Doubles restricted to 1 urban mi.,1 mi. on 2-lane roads, 3 mi. on 4-lane roads in rural areas
o – Unpermitted twins: .5 mi for access to food, fuel, lodging, terminals
p – 2 mi.

Site Location Index

LABOR ENVIRONMENTS—AVERAGE WAGES

State	Avg. Wage/hr.	% Change	State	Avg. Wage/hr.	% Change
Alabama	$ 8.76	19.51	Nebraska	$ 9.34	10.27
Arizona	9.94	13.86	Nevada	9.76	10.91
Arkansas	7.88	17.79	New Hampshire	9.28	33.72
California	10.77	16.56	New Jersey	10.42	20.32
Colorado	10.11	17.15	New Mexico	8.74	21.05
Connecticut	10.46	27.10	New York	10.09	20.84
Delaware	10.69	23.73	North Carolina	7.83	23.31
Florida	8.16	16.24	North Dakota	8.43	12.40
Georgia	8.51	26.07	Ohio	11.73	16.48
Idaho	9.70	12.53	Oklahoma	10.14	16.69
Illinois	10.85	16.54	Oregon	10.55	5.29
Indiana	11.06	12.97	Pennsylvania	9.98	15.64
Iowa	10.61	5.99	Rhode Island	8.19	23.90
Kansas	9.97	13.30	South Carolina	8.10	21.26
Kentucky	10.04	19.81	South Dakota	7.94	7.88
Louisiana	10.90	16.20	Tennessee	8.78	22.63
Maine	8.77	21.47	Texas	9.85	14.53
Maryland	10.08	14.81	Utah	9.95	18.45
Massachusetts	9.77	28.89	Vermont	9.12	24.08
Michigan	12.97	16.01	Virginia	9.15	24.15
Minnesota	10.37	13.83	Washington	11.70	4.19
Mississippi	7.59	18.41	West Virginia	10.56	12.34
Missouri	9.99	18.09	Wisconsin	10.55	12.59
Montana	10.61	7.61	Wyoming	9.78	13.46

AVERAGE WAGES represents the average hourly wage paid to manufacturing workers. The column labeled "% change" indicates the trend in the average manufacturing wage over the last five years. As was the case last year, the lowest average wage is paid in Mississippi, and the highest in Michigan. The increase in wages over the five-year period has averaged about 17 percent. New Hampshire, however, has led the nation with increases amounting to over 33 percent. The most favorable wage climate is in the Southeast. At the same time, however, wages in the Southeast are rising faster than most areas of the country. Only in New England, the region ranking second in average wages paid, were wages increasing at a faster rate. Source: General Manufacturing Climates, Grant Thornton.

LABOR ENVIRONMENTS—UNIONIZATION

State	Union Workforce	% Change	State	Union Workforce	% Change
Alabama	16.66%	−10.74	Nebraska	10.60%	−13.61
Arizona	4.10	−4.88	Nevada	6.84	−9.55
Arkansas	12.97	−13.67	New Hampshire	7.25	−5.19
California	23.75	−6.57	New Jersey	24.65	−2.64
Colorado	10.68	−2.68	New Mexico	10.82	−19.07
Connecticut	15.58	−2.96	New York	50.27	−12.89
Delaware	20.72	8.85	North Carolina	4.89	0.65
Florida	9.05	−0.22	North Dakota	11.46	−22.54
Georgia	12.45	−5.84	Ohio	42.07	−12.98
Idaho	9.28	−22.50	Oklahoma	17.14	−1.81
Illinois	34.18	−41.71	Oregon	23.01	−9.88
Indiana	41.28	−0.20	Pennsylvania	41.86	−8.53
Iowa	23.10	−37.92	Rhode Island	11.01	−2.88
Kansas	11.81	−8.62	South Carolina	3.59	−1.62
Kentucky	24.76	−16.24	South Dakota	3.10	−8.50
Louisiana	20.84	8.66	Tennessee	13.98	−10.85
Maine	19.79	3.07	Texas	15.03	1.78
Maryland	30.27	−5.68	Utah	5.50	−8.64
Massachusetts	19.35	−4.68	Vermont	8.91	−5.90
Michigan	51.94	− 9.03	Virginia	12.50	4.27
Minnesota	19.28	−33.22	Washington	30.00	−27.05
Mississippi	8.84	−0.90	West Virginia	33.60	−6.27
Missouri	34.07	−47.28	Wisconsin	26.65	−27.00
Montana	23.83	−12.25	Wyoming	18.52	−8.17

UNIONIZATION indicates the degree to which the available workforce is unionized. This factor has a potential effect on the future cost of labor and on labor relations. The second column indicates the change in unionization as a percentage, over five years. The figures show that the decline in union membership characteristic of the past several years is continuing. In only eight states did union membership grow during 1987. In each case, the increase was modest, and only in Virginia was the increase indicative of a longer-term trend. In contrast, Missouri's union workforce has eroded by nearly 50 percent over five years. The Great Lakes region, where only Minnesota is excluded from the list of the 10 most unionized workforces, is the hotbed of unionization. Source: General Manufacturing Climates, Grant Thornton.

LABOR PRODUCTIVITY

State	Work Stoppages	Value Added/$	State	Work Stoppages	Value Added/$
Alabama	0.366%	$3.58	Nebraska	1.090%	4.62
Arizona	0.002	4.51	Nevada	0.000	4.51
Arkansas	0.000	3.66	New Hampshire	0.000	3.75
California	0.027	4.72	New Jersey	0.003	4.64
Colorado	0.000	4.62	New Mexico	0.000	4.31
Connecticut	0.034	4.46	New York	0.010	5.22
Delaware	0.000	4.41	North Carolina	0.000	4.45
Florida	0.003	4.71	North Dakota	0.000	4.86
Georgia	0.024	4.33	Ohio	0.123	3.77
Idaho	0.025	3.91	Oklahoma	0.000	4.23
Illinois	0.130	4.27	Oregon	0.139	3.69
Indiana	0.398	3.65	Pennsylvania	0.190	3.85
Iowa	1.073	4.94	Rhode Island	0.000	3.58
Kansas	0.000	4.97	South Carolina	0.000	3.54
Kentucky	0.000	4.62	South Dakota	2.868	4.77
Louisiana	0.003	4.74	Tennessee	0.124	3.97
Maine	0.428	3.38	Texas	0.031	4.87
Maryland	0.008	4.10	Utah	0.509	4.63
Massachusetts	0.055	4.77	Vermont	0.000	3.60
Michigan	0.021	3.06	Virginia	0.018	4.25
Minnesota	0.146	4.78	Washington	0.094	4.04
Mississippi	0.000	3.92	West Virginia	0.000	3.83
Missouri	0.003	4.16	Wisconsin	0.016	4.01
Montana	0.052	2.91	Wyoming	0.000	4.17

LABOR PRODUCTIVITY represents, in the first column, the percentage of working hours lost due to work stoppages. The second set of figures shows the average value added to manufacturing production for each dollar invested in payroll expenses. The range in both sets of figures is wide. Several states recorded no work stoppages within the scope of the survey (data was not collected for stoppages involving fewer than 1,000 workers). On the other hand, South Dakota reported over 2 percent of available time lost. The value of each added dollar of payroll ranged from $2.91 to $5.22, but while the figures among individual states varied greatly, the differences from region to region were less dramatic. Source: General Manufacturing Climates, Grant Thornton.

Site Location Index

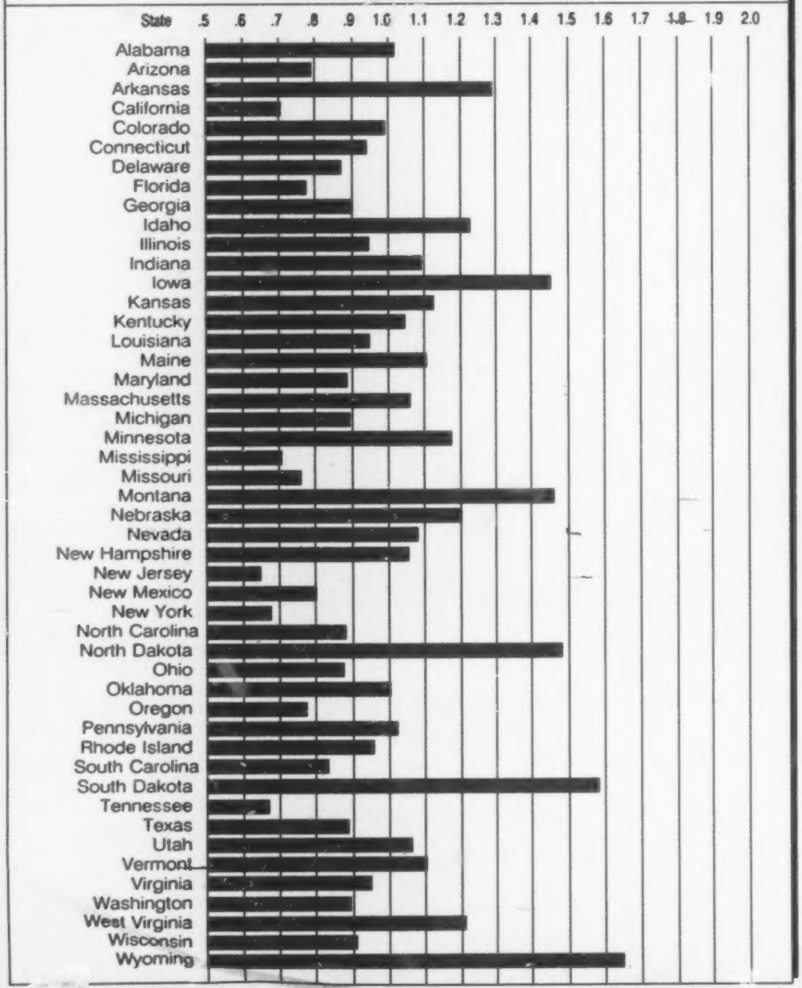
RECIPROCITY AGREEMENT PARTICIPATION

State	IRP	UPA	MRA	IFTA	RFTA	State	IRP	UPA	MRA	IFTA	RFTA
Alabama	yes	yes	no	no	no	Nebraska	yes	yes	no	no	no
Arizona	yes	yes	yes	yes	no	Nevada	no	no	yes	no	no
Arkansas	no	yes	no	no	no	New Hampshire	no	no	no	no	yes
California	yes	yes	no	no	no	New Jersey	no	no	yes	no	no
Colorado	yes	yes	yes	no	no	New Mexico	no	yes	no	no	no
Connecticut	yes	no	no	no	no	New York	no	no	no	no	no
Delaware	no	no	no	no	no	North Carolina	yes	no	yes	no	no
Florida	yes	no	yes	no	no	North Dakota	yes	yes	yes	no	no
Georgia	no	no	yes	no	no	Ohio	no	no	no	no	no
Idaho	yes	yes	no	yes	no	Oklahoma	yes	no	no	yes	no
Illinois	yes	yes	yes	no	no	Oregon	yes	yes	no	no	no
Indiana	yes	no	yes	no	no	Pennsylvania	yes	no	no	no	no
Iowa	yes	yes	no	yes	no	Rhode Island	no	no	no	no	no
Kansas	yes	yes	yes	yes	no	South Carolina	yes	yes	yes	no	no
Kentucky	yes	no	yes	no	no	South Dakota	no	yes	yes	no	no
Louisiana	yes	no	yes	no	no	Tennessee	yes	no	no	no	no
Maine	no	no	yes	no	no	Texas	yes	no	no	no	no
Maryland	yes	no	yes	no	no	Utah	yes	yes	no	no	no
Massachusetts	no	no	no	no	no	Vermont	yes	no	no	no	no
Michigan	yes	no	yes	no	no	Virginia	yes	no	no	no	no
Minnesota	yes	yes	no	yes	no	Washington	yes	yes	no	yes	no
Mississippi	yes	no	yes	no	no	West Virginia	yes	no	no	no	no
Missouri	yes	yes	yes	no	no	Wisconsin	yes	no	no	no	no
Montana	yes	yes	yes	no	no	Wyoming	yes	yes	no	no	no

RECIPROCITY AGREEMENT PARTICIPATION is a checklist of the major truck registration agreements:

- Multistate Reciprocal Agreement – a registration plate issued in the home state is honored by all participants. Fuel taxes are paid to each state on a per-mile basis;
- International Registration Plan – based on a single apportioned registration plate and a card carried inside the vehicle that lists other states it can operate in. Registration fees based on historical or forecast mileages;
- Uniform Proration Agreement – a home state license contains spaces for decals purchased from other states. Registration fees are based on actual mileages;
- International Fuel Tax Agreement & Regional Fuel Tax Agreement – base state issues license, decal, receives all fees and reports, and distributes payments to appropriate jurisdictions.

TRANSPORTATION NETWORK



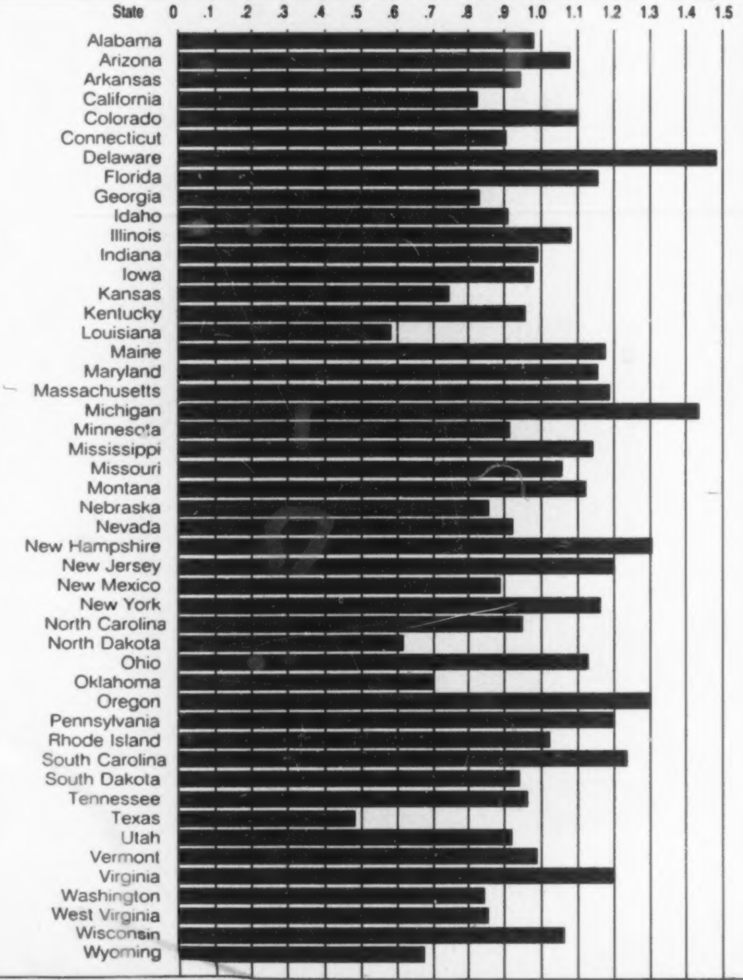
TRANSPORTATION NETWORK is an index of each state's quality of transportation. The index is an overall rating based on such factors as the state's transportation budget, condition of roadways, per capita transportation expenditures, average daily traffic volumes, and a number of other commuter-related factors. A rating of 1.000 is defined as the national average. The higher the rating, the better the state's transportation network. Only three regions of the country averaged higher than the national average – New England, the North Central and South Central regions. The North Central region alone accounted for seven of the top ten ratings. Surprisingly Pennsylvania, which in a 1987 survey of interstate truckers was named the state least convenient to drive in, ranked above the national average in this study. The Mid East region as a whole is rated the nation's worst, however. New Jersey and New York received two of the three worst scores in the country, and only two states in the region topped a score of 1.000. Data are for the year 1987. Source: General Manufacturing Climates, Grant Thornton.

STATE AND LOCAL TAX EFFORTS

State	Tax Effort	% Change
Alabama	87.286	1.73%
Arizona	96.855	−18.31
Arkansas	92.600	7.69
California	94.906	−8.35
Colorado	85.573	−6.19
Connecticut	98.940	−0.92
Delaware	79.592	−10.52
Florida	75.457	3.39
Georgia	90.041	−6.53
Idaho	90.554	2.30
Illinois	107.120	3.84
Indiana	96.057	13.48
Iowa	111.940	16.85
Kansas	97.434	4.85
Kentucky	83.918	−2.07
Louisiana	89.570	22.87
Maine	104.036	−6.40
Maryland	100.961	−7.13
Massachusetts	106.276	−21.02
Michigan	120.666	4.02
Minnesota	117.865	7.73
Mississippi	92.320	−4.14
Missouri	84.003	0.29
Montana	98.879	15.58
Nebraska	93.248	−9.22%
Nevada	63.931	7.16
New Hampshire	64.635	−13.86
New Jersey	104.636	−6.56
New Mexico	78.588	−0.88
New York	156.009	−6.83
North Carolina	92.811	−4.29
North Dakota	82.293	7.97
Ohio	103.236	18.39
Oklahoma	79.339	21.27
Oregon	101.482	8.69
Pennsylvania	103.195	−1.40
Rhode Island	118.045	−4.14
South Carolina	95.245	−0.30
South Dakota	86.732	−1.77
Tennessee	82.017	−2.78
Texas	74.282	20.57
Utah	111.944	7.65
Vermont	92.760	−11.02
Virginia	86.919	−2.39
Washington	94.984	1.26
West Virginia	104.115	31.40
Wisconsin	127.542	9.60
Wyoming	102.611	26.43

STATE AND LOCAL TAX EFFORTS measures the degree to which states make use of their capacity to tax. The index is based on a comparison of a state's tax rates to a national average (defined as a rating of 95.905). A lower rating indicates a lower relative tax burden. The second column of the chart measures the change in the state's tax effort over the past five years. The national average change is an increase of 2.25 percent. The figures indicate the heaviest tax burden is borne by the Great Lakes region. The region's average tax effort (112.081) is the nation's highest. At the same time, every state in the region has shown five-year growth at a pace greater than the national average. The Mid Eastern region, bearing the second highest tax burden, is undergoing a moderation of tax rates in each of its six states. Source: General Manufacturing Climates, Grant Thornton.

STATE BUSINESS INCENTIVES



STATE BUSINESS INCENTIVES is an indication of each state's willingness to attract new business and expand current businesses through grants, early stage debt programs, inventory tax exemptions, etc. The index also considers such factors as changes in the unemployment rate over a five-year period and the rate of new business formation in the state. A rating of 1.000 represents the national average. The higher the rating, the better the state's business incentives. The ratings show an effort on the part of the nation's older industrial centers to draw businesses back from the sunbelt. The Mid Eastern, New England, and Great Lakes regions were the top three business suitors nationwide. Otherwise, only the Southeast rated above the national average. In the top three regions, 13 out of 18 states were given a rating above 1.000. (One state however, West Virginia, fell in among the ten worst performers nationwide.) In contrast, none of the four states in the South Central region topped the national average. Source: General Manufacturing Climates, Grant Thornton.

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ARE YOU GETTING YOUR PROPER REWARD?

New data on salaries, bonuses and benefits within the logistics profession reveal widely varying pay patterns from function to function, and industry to industry. Are there good reasons for the differences?

A Special DISTRIBUTION Report

Greg Weber heads materials management for a diversified food products manufacturer. He has been working in transportation and physical distribution for 11 years, and has been in his present position for two years. He manages a staff of 14 and is accountable for meeting specific inventory and finished-goods delivery targets. His department has an operating budget of $3 million and an annual freight bill of $25 million.

Last year, Weber was paid a base salary of $68,400 and earned a cash bonus of $13,700, as part of his company's performance incentive program. His company also provided him with a benefits package (including some combination of health, dental and life insurance, pension set-asides, capital accumulation contributions, and other fringes) worth a total of $28,500.

Lawrence Dornhoefer, distribution manager for a large manufactur-

continued

COMPENSATION—LOGISTICS FUNCTION*

(In thousands of dollars)

Position	Heavy Mfg.	Light Mfg.	Chem./ Pharm.	Food & Tob.	Wholesale/ Retail
Entry professional					
Base Salary	$28.5	28.9	31.6	30.7	28.6
Total Cash	28.6	28.9	31.7	30.8	28.6
Fully qualified professional					
Base Salary	46.4	45.2	49.9	43.4	42.6
Total Cash	46.9	46.2	50.4	44.8	45.8
Seasoned professional/ Middle management					
Base Salary	72.8	68.9	76.0	68.4	75.4
Total Cash	76.1	81.7	84.7	82.1	91.7
Advanced management					
Base Salary	101.9	–	107.6	110.4	–
Total Cash	116.9	–	131.4	146.0	–
Executive/Head of Function					
Base Salary	–	–	–	125.1	–
Total Cash	–	–	–	171.6	–

Source: Hay Management Consultants

** Includes inventory control, warehousing and distribution, transportation and traffic, materials management and purchasing positions. Total cash = salary + bonuses. Blanks indicate a lack of statistically significant data.*

er of turbine engines, has a job, and work history, that are nearly identical to Greg Weber's. Dornhoefer's base pay is $72,800, 6.4 percent higher than Weber's. But his bonus last year was just $3,300. As a result, Dornhoefer's total cash compensation was $6,000, or 7.3 percent, lower than Weber's. Dornhoefer's benefits package was also of slightly less value ($27,500) than the one given to his food industry "counterpart."

Is Weber overpaid? Is Dornhoefer underpaid? Or is there justification, in both cases, for the discrepancy? What are the performance implications of the difference between the two managers' incentive pay? How do the reward packages for both of these professionals compare with those earned by incumbents of other logistics-related positions in their respective companies and industries, as well as in the logistics field at large? Most importantly, is there evidence of precision in the way pay levels in logistics are now being set? Or does it appear to be largely an arbitrary process?

Actual Profiles

Greg Weber and Lawrence Dornhoefer are fictitious names, but their job descriptions, as well as their salary, bonus and benefits figures are very real. They represent job profiles based on averages for people in their specific function and industry. Their profiles, and many others for logistics-related positions, were compiled by the Hay Group, a management consulting firm that maintains the U.S.'s largest database of job description and compensation information (see box, p. 66).

In addition to the specific findings reflected by the charts presented throughout this article, a number of general conclusions can be drawn from the Hay analysis of current pay trends in the logistics field.

Industry Differentials. Controlling for similarity of job size, heavy and light manufacturing companies tend to pay lower, by some 5 to 9 percent, than companies in the food

continued

COMPENSATION: TRAFFIC/TRANSPORTATION
(in thousands of dollars)

Position	Heavy Mfg.	Light Mfg.	Chem./ Pharm.	Food & Tob.	Wholesale/ Retail
Entry professional					
Base Salary	$28.9	28.5	32.3	31.5	31.5
Total Cash	29.2	28.9	32.5	31.7	31.9
Fully qualified professional					
Base Salary	46.3	46.4	48.6	47.2	46.3
Total Cash	46.3	46.9	49.0	47.9	46.8
Seasoned professional/ Middle management					
Base Salary	74.5	–	75.4	66.3	–
Total Cash	77.2	–	84.8	77.5	–

Source: Hay Management Consultants
Total cash = salary + bonuses. Blanks indicate a lack of statistically significant data.

COMPENSATION: WAREHOUSING/DISTRIBUTION
(in thousands of dollars)

Position	Heavy Mfg.	Light Mfg.	Chem./ Pharm.	Food & Tob.	Wholesale/ Retail
Entry professional					
Base Salary	$30.0	29.0	31.1	32.3	–
Total Cash	30.0	29.1	31.2	32.7	–
Fully qualified professional					
Base Salary	50.8	44.0	49.3	38.9	43.9
Total Cash	53.2	45.6	49.8	40.4	44.3
Seasoned professional/ Middle management					
Base Salary	81.5	68.1	82.4	65.4	–
Total Cash	83.4	82.1	89.6	76.3	–

Source: Hay Management Consultants
Total cash = salary + bonuses. Blanks indicate a lack of statistically significant data.

COMPENSATION: INVENTORY CONTROL
(in thousands of dollars)

Position	Heavy Mfg.	Light Mfg.	Chem./ Pharm.	Food & Tob.
Entry professional				
Base Salary	$29.1	28.3	32.2	29.9
Total Cash	29.1	28.4	32.4	30.2
Fully qualified professional				
Base Salary	47.8	43.3	47.8	47.5
Total Cash	48.1	44.1	48.9	49.1

Source: Hay Management Consultants
Total cash = salary + bonuses. Blanks indicate a lack of statistically significant data.

INCENTIVES AS A PERCENT OF TOTAL CASH COMPENSATION
(Middle Management Positions)

Position	Heavy Mfg.	Light Mfg.	Chem./ Pharm.	Food & Tob.	Wholesale/ Retail
Materials Management	4.5%	14.7	8.9	15.0	14.0
Purchasing/Contracting	4.3	18.2	11.4	17.7	21.0
Warehousing/Distribution	2.3	17.1	8.0	14.3	–
Traffic/Transportation	–	–	3.3	–	22.0

Source: Hay Management Consultants

Incentives may be greater for purchasing because it has more direct contact with outside vendors. Blanks indicate a lack of statistically significant data.

and tobacco or chemical/pharmaceutical sectors. When the value of benefits is added to the comparison, the gap doubles; first, because many benefits are determined as a percentage of salary, and second, because benefit plan provisions are somewhat more generous in the higher-paying sectors.

This trend is in direct contrast with patterns that emerge when compensation for other functions, such as production, engineering, or other line positions are compared across industry lines. For those functions, the manufacturing sector has long been known for higher pay levels. Perhaps the reversal where logistics is concerned can be attributed to a higher visibility and complexity of the function in the food and chemical sectors—both the greater risk

continued

FINDING YOUR LEVEL

The Hay Group/DISTRIBUTION study of compensation and benefit practices in the logistics profession divided positions into five job levels, according to the definitions below.

Caution: In a profession known for proliferation and broad overlap of titles, the "typical titles" provided for each definition may not be analogous with those used in your organization. Definitions above the second level must be examined carefully, as job content will vary dramatically according to the way a particular organization defines a logistics department's size, complexity and importance.

Entry Professional—Typically filled by incumbents with a college degree or equivalent and less than one year of work experience. Assignments are usually designed to provide exposure to the organization and/or the function, are relatively short-term, and are reviewed frequently for progress against end results. In the logistics field, typical entry-level titles include: buyer; inventory control analyst; expeditor; rate analyst; shipping clerk; traffic coordinator/administrator.

Fully Qualified Professional—At this level, incumbents are expected to be able to handle 80 to 90 percent of work assignments without close supervision or direction. Incumbents routinely try to solve problems by applying theories and policies of the discipline. Judgments are supported by the equivalent of a college degree and three to five years of relevant work experience. In the logistics field, typical fully qualified professional titles include: inventory control specialist; customer service manager; traffic/transportation manager.

Seasoned Professional/Middle Management—Incumbents at this level are highly seasoned professionals, resulting from the equivalent of a college degree and seven-plus years of relevant experience in the discipline. Incumbents are given broad direction on large projects, and are often called upon to discuss and implement creative solutions to non-standard problems. The upper end of this level also includes first- or second-level managerial positions accountable for achieving results through a subordinate staff. In the logistics field, typical seasoned professional/middle management titles include: warehouse/DC manager; superintendent of inventory control; purchasing manager; materials manager; fleet manager; distribution manager.

Advanced Management—Typically, this level includes the head of a major functional area or discipline, who is accountable for integrating several areas of technical knowledge/endeavor, and achieving results through subordinate staff. In the logistics field, typical advanced management titles include: director of transportation/distribution; director of warehouse operations; procurement director; director of fleet operations; director of logistics.

Executive/Head of Function—Top-level position with direct access to corporate management and multi-functional responsibilities. In logistics, typical executive titles include: executive vice president-logistics; vice president, transportation; vice president, materials management.

and perishability tied to the goods being moved, and the higher percentage of cost of sales represented by the function in those industries.

Wide Swings in Top Pay. Jobs in the top three levels of the logistics function (see definitions in the box on p. 54) are paid from an average of $76,100 total cash in light manufacturing companies to over $171,000 total cash in food and tobacco companies. At the advanced management level alone, the difference ranges from $116,900 in heavy manufacturing to nearly $146,000 in food and tobacco firms.

Three major reasons account for the gap:

- varying emphasis placed on the "criticality" of the logistics function by different industry sectors;
- varying definitions of job size (accountabilities, number of persons managed, etc.);
- widely varying use of incentives as a percentage of total cash compensation (see table, p. 54).

ADDED BENEFITS

Like all professionals who have had to learn to cope with smaller and less frequent base salary increases, logistics managers have become more conscious of the value of benefits packages as a key component of their total compensation. But the initial analysis of benefits for the logistics positions in the Hay database revealed that, here too, there may be significant discrepancies from industry to industry.

As the table below illustrates, among the five industry sectors studied, only companies in the chemical/pharmaceutical/petroleum sector provide above-average benefits at all salary levels for logistics positions. Benefits are lowest in the wholesale/retail sector.

Overall, the averages for logistics professionals represent slight improvements over those for all positions in industrial companies. The logistics average of $28,500 at the $70,000 salary level is over $500 greater than the overall average, and the logistics average of $38,000 at the $100,000 salary level is nearly $1,400 greater than the industrial norm.

At the $70,000 salary level for all positions in industrial companies, according to the 1987 Hay/Huggins Benefit Report, the breakdown of employer-paid values by benefit area is as follows:

Statutory – 5.0% of salary
Capital Accumulation – 6.4%
Health Care – 5.2%
Group Life – 2.1%
Total – 40.0% of salary

Holidays/Vacations – 10.9%
Pension – 6.5%
Disability – 3.9%

VALUE OF BENEFITS PROVIDED TO LOGISTICS PROFESSIONALS

Salary Level	Heavy Mfg.	Light Mfg.	Chem./ Pharm.	Food & Tob.	Wholesale/ Retail
$40,000 Salary					
Benefits ($000)	18.3	17.8	18.9	18.5	17.6
% of Salary	45.1	44.4	47.4	46.2	43.9
$70,000 Salary					
Benefits ($000)	27.8	27.1	28.9	28.4	26.9
% of Salary	39.8	38.7	41.4	40.6	38.5
$100,000 Salary					
Benefits ($000)	36.7	36.8	39.2	38.8	35.3
% of Salary	36.7	36.8	39.2	38.8	35.3

Source: Hay Management Consultants

Favorite Subfunctions. The five industry sectors studied showed distinct pay preferences at the "fully qualified professional" level among the three subfunctions of the logistics function. Heavy manufacturing and chemical/pharmaceutical companies paid highest (total cash compensation) in the warehousing/distribution subfunction, but light manufacturing and wholesale/retail companies favored the shipping/-transportation subfunction. Only food and tobacco companies among the five sectors paid highest in the inventory control subfunction, perhaps because these industries are more inventory-sensitive than the others.

Purchasing Incentives. For all industry sectors except heavy manufacturing, where incentive payouts are strikingly lower for all positions and job levels, incentive payouts are significantly greater at the middle management level for purchasing and contracting positions than for materials management positions. For example, in the wholesale/retail sector, incentives as a percent of total cash compensation are 21.0 percent for purchasing positions, and 14.0 percent for materials management positions. The difference may be attributable to the fact that purchasing has more direct contact with outside vendors, and thus has more incentive to produce savings that are clearly discernible on the bottom line.

Refining the Process

What can the Hay data tell us about the current job market in the logistics field, and about the effectiveness of the pay plans that are currently in use? More than anything else, the numbers highlight the importance of bringing greater precision to reward management for distribution positions.

The pay and benefits discrepancies between logistics functions and subfunctions (materials management vs. purchasing, warehousing vs. inventory control, etc.), and from industry to industry, reflect the exis-

continued

tence of a fluid pay market. When a pay market is not stagnant, compensation levels can be used to position a company as a high-cost or low-cost producer, and thus have a greater impact on an organization's competitive stature and bottom-line performance. A fluid pay market also increases the potential for attracting top talent from the competition—or for losing your own best people.

For all of these reasons, the Hay data reflects a need for companies to assess their current methods of setting pay and benefits levels for logistics-related positions. Specifically, top management must determine if current compensation practices for logistics positions are sufficient to 1) clearly convey within the corporation the relative importance of the logistics function *vis a vis* other internal functions; 2) attract, retain, and motivate logistics professionals who can meet key strategic objectives; and 3) guard against the loss of key logistics personnel to competitors or other businesses.

Questions that need to be answered during this assessment process include:

- Where should logistics fit into our internal pay structure? Should we be paying our logistics people less, as much as, or more than other functions such as marketing, production, sales, research, etc.?
- What is the current risk of turnover within our logistics function? What would be the cost of replacing our current staff?
- Where are we now, and where do we want to be, in comparison with external pay markets for the logistics function? Are our competitors paying less, or more, for comparable managers? Is our pay practice for logistics in line with our overall strategy to be a high-, average-, or low-cost player in our market?

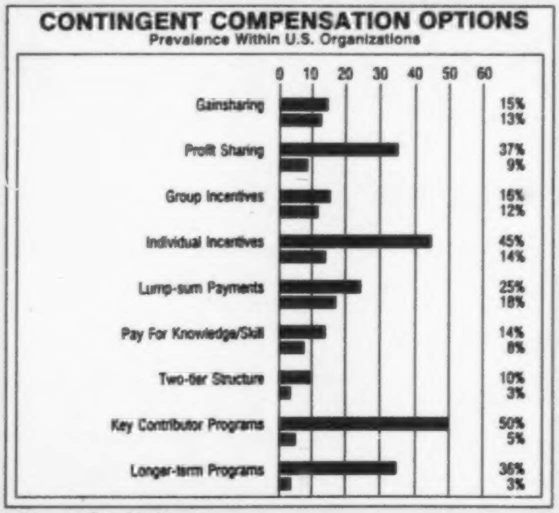
The onus for bringing these critical questions to the attention of top management is squarely on logistics professionals themselves. At first there is likely to be misunderstanding and/or apprehension on management's part, because of the ill-defined nature and roles of many logistics positions. But these fears can be assuaged through the use of tools such as formal job analysis and job measurement methodologies that

continued

CONTINGENT COMPENSATION: THE PERFORMANCE LINK

The DISTRIBUTION/Hay study indicates greater use of incentives within the logistics function, mirroring a larger trend for all professional positions in U.S. corporations. Within recent years, "contingent compensation" has emerged as a reward management technique that can help forge the link between cost-effective pay levels and peak employee performance.

The many forms of contingent compensation now in use include:



■ Have ■ Considering

Source: Hay Management Consultants

Gainsharing—Unit-wide bonus systems designed to create, measure, and share improvements in productivity that would not otherwise have occurred. Most effective in environments where quantitative levels of production are important measures of business success. Within logistics, these plans would be most clearly applicable at a distribution facility where clear customer service or inventory reduction targets have been identified.

Profit Sharing—Like gainsharing, profit sharing is a productivity improvement technique and is most appropriate in situations where collective teamwork is required to produce results. Within logistics, profit sharing would be most easily applied in separate distribution or fleet subsidiaries that have been given a distinct set of business directives and profit/loss accountabilities.

Group Incentives—Similar to gainsharing plans, except that bonuses are based on the performance of a small group, rather than that of a larger unit. Within logistics, group incentives could be applied to improve performance within a specific subfunction, such as transportation, inventory control, customer service, or purchasing.

Individual Incentives—Ties all or part of an employee's pay to his/her own performance. Typically used in environments where individual output is quantifiable. The key to applying individual incentives

continued

can take the guesswork out of the process. The rankings yielded by these methodologies can pinpoint precisely where logistics positions stack up against other jobs within the organizations, which have been evaluated in the same fashion.

The rankings can then be used to compare compensation for logistics positions against those in external organizations. Shaping these comparisons around a process that takes a precise measure of a job's content, requirements, and responsibilities, and does not just compare similar titles, eliminates the apples-and-oranges problem that is particularly acute in the logistics field, where titles can be very misleading.

A second noteworthy trend revealed by the Hay data is the increasing use of cash incentives as a component of a logistics manager's total cash compensation. These incentives do not show up to any degree until the middle management level; but at that point, as we have already seen, they have begun to comprise significant portions (in some cases more

continued

Contingent Compensation, continued

within the logistics function is tying them to tangible performance measures: freight bill reduction, on-time deliveries, warehouse space utilization, etc.

Lump-sum Payments—One-time payments or bonuses given to eligible employees in lieu of all or part of a base salary increase. The payment is usually given for performance above a fully acceptable level, and does not become part of the base salary. This can be an effective method of maintaining motivational levels and rewarding top performance without increasing fixed costs.

Pay for Knowledge/Skill—Determines pay according to the number of jobs an employee can do, or by the level of skill used at a particular point in time. Works well in environments that are organized around work teams instead of individual job classifications, and in matrix organizations where the emphasis is on overall results and on roles played. In logistics, this could be an effective technique for getting around the "poor cousin" image of the function, by highlighting the versatility and cross-functional contributions of many of the professionals in the field.

Two-tier Structures—Brings new hires into an organization at a rate of pay that can be as much as 50 percent lower than that given to employees hired previously for similar jobs. Many two-tier plans grow out of sizable wage increases and cost-of-living adjustments that ultimately are negotiated into collective bargaining agreements.

Key Contributor Programs—Designed for individuals or teams whose skills, abilities, or contributions have made a significant impact on a company's products, services or processes. "Significant impact" should entail nothing short of increased profitability, demonstrated improvement in competitive advantage, or measurable productivity gains. When a logistics-related objective is part of a major strategic initiative for an organization, such as the opening of a DC to expand into a new geographic market, or the introduction of MRP to cut inventory, those with logistics accountabilities should be made part of the key contributor incentive programs.

Longer-term Programs—Designed to reward key employees, primarily executives, for corporate or unit performance measured over a period of more than one year. These programs are grouped into four major categories: stock options, restricted stock, performance units/shares, and phantom stock.

The bar chart on p. 60 shows that key contributor programs are most prevalent among the contingent compensation options currently in use by 425 surveyed organizations. But those organizations indicate they plan to give extensive future consideration to other options also, especially lump-sum payments, gainsharing and group incentives. As the table at the left shows, the surveyed organizations reported that group incentives have demonstrated the most direct impact on improved performance to date, followed by longer-term programs and gainsharing.

CONTINGENT COMPENSATION: EFFECT ON BUSINESS PERFORMANCE
(% responding)

Compensation Program	Better	About the Same	Worse
Gainsharing	55	39	6
Profit Sharing	46	42	12
Group Incentives	67	25	8
Individual Incentives	50	41	9
Lump-sum Payments	39	51	10
Pay for Knowledge/Skill	39	48	13
Two-tier Structure	44	50	6
Key Contributor Programs	38	57	5
Longer-term Programs	58	30	12

Source: Hay Management Consultants

than one-fifth) of a job holder's total pay. The wholesale/retail and food and tobacco sectors, in particular, seem to now be leaning heavily toward increased leverage of logistics through incentives, perhaps, again, because of the direct impact logistics has been shown to have on sales, market penetration, and cost control in those industries.

The trend toward incentives, and the discrepancies revealed through closer analysis of current incentive patterns, raise an additional set of questions that top management must address:

- Is our current approach to reward management effectively motivating incumbents and eliciting the performance we need to meet our overall business objectives? Do the incentives for logistics-related positions link properly with those created for "sister" functions such as manufacturing or quality control?
- Should we be increasing the percentage of performance-based incentives in our mix of total compensation for logistics? Should we be pushing incentives into lower level positions? Should some disciplines within the function, such as purchasing or transportation management, be leveraged more than others toward incentive pay?
- Do we have the right measures and standards in place to effectively institute incentives and gauge performance? How do we avoid establishing conflicting objectives, such as inventory reduction targets that create a need for expedited, and therefore more costly, transportation?
- Is our corporate culture, particularly the logistics function, ready to accept a greater role for contingent compensation techniques such as profit sharing, gainsharing, key contributor programs, or pay for knowledge/skill? Are some techniques better for us than others given our structure, market position and strategic objectives? Tools are available to help management do more than throw darts when addressing these important issues. Quantitative audits can diagnose the readiness of an organization for a shift to greater use of incentive-based pay techniques, and identify which techniques are most likely to achieve the desired results.

Other diagnostic approaches can be employed to ensure that the objectives and mechanics of whatever pay system is used are in synch with those of the business operation as a whole. For example, care must be taken to make sure that a logistics-oriented incentive, such as inventory reduction, does not hamstring a larger objective, such as timely response to added demand caused by sales peaks or special promotions.

With the proper management tools and reliable, comprehensive survey data, precision can be brought to the process of establishing equitable, effective reward levels for logistics-related functions. Valid comparisons between the Greg Webers and Lawrence Dornhoefers of the profession can be made, and organizations can be assured that their compensation dollars are earning maximum returns on their investment in logistics expertise. ■

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THE DISTRIBUTION/HAY STUDY

Ever since the need for a logistics specialist was first identified, there has been little rhyme or reason to the way that specialist's services have been valued or paid for. Attempts to measure and explain existing pay levels within the logistics function have only added to the confusion. The industry has remained sorely in need of a definitive study that can link reward management for logistics-related functions to broader issues of organization design, performance measurement, and competitive advantage.

To get the ball rolling, DISTRIBUTION turned to Hay Management Consultants, a unit of the Hay Group, a worldwide management consulting firm specializing in human resources issues. Hay Management maintains a database of salaries, total cash compensation, and benefits for 1.5 million jobs in 1,200 U.S. organizations.

From that database, Hay has extracted existing information about compensation and benefits for 20,000 logistics-related jobs in 500 organizations, reflecting pay patterns through May of 1988. The jobs include positions in traffic/transportation, distribution, warehousing, inventory control, materials management, and purchasing. This data was sufficient to produce the initial analysis that forms the basis of this article. The findings of this analysis will also be presented on October 12 at the Council of Logistics Management meeting in Boston.

Because this analysis identifies many areas where more data is needed, DISTRIBUTION and Hay now plan to conduct, on an annual basis, a more comprehensive survey of cash compensation and organization design for transportation, distribution and related functions. An additional study of "contingent compensation" practices (performance-related incentives) within the logistics discipline is also planned. Readers are invited to help shape the content and focus of these studies, and indicate their interest in participating, by completing the Dialogue questionnaire on pp. 7-8 of this issue.

Contributing research and analysis to this initial study were Tom Jacob, John Yurkutat, John Linton, Marsh Bates, and John Ciervo of Hay Management Consultants.